

Hybrid Cloud Automation Framework (HCAF):

How to
Accelerate and
De-risk the Path to
Hybrid Cloud

CDI LLC

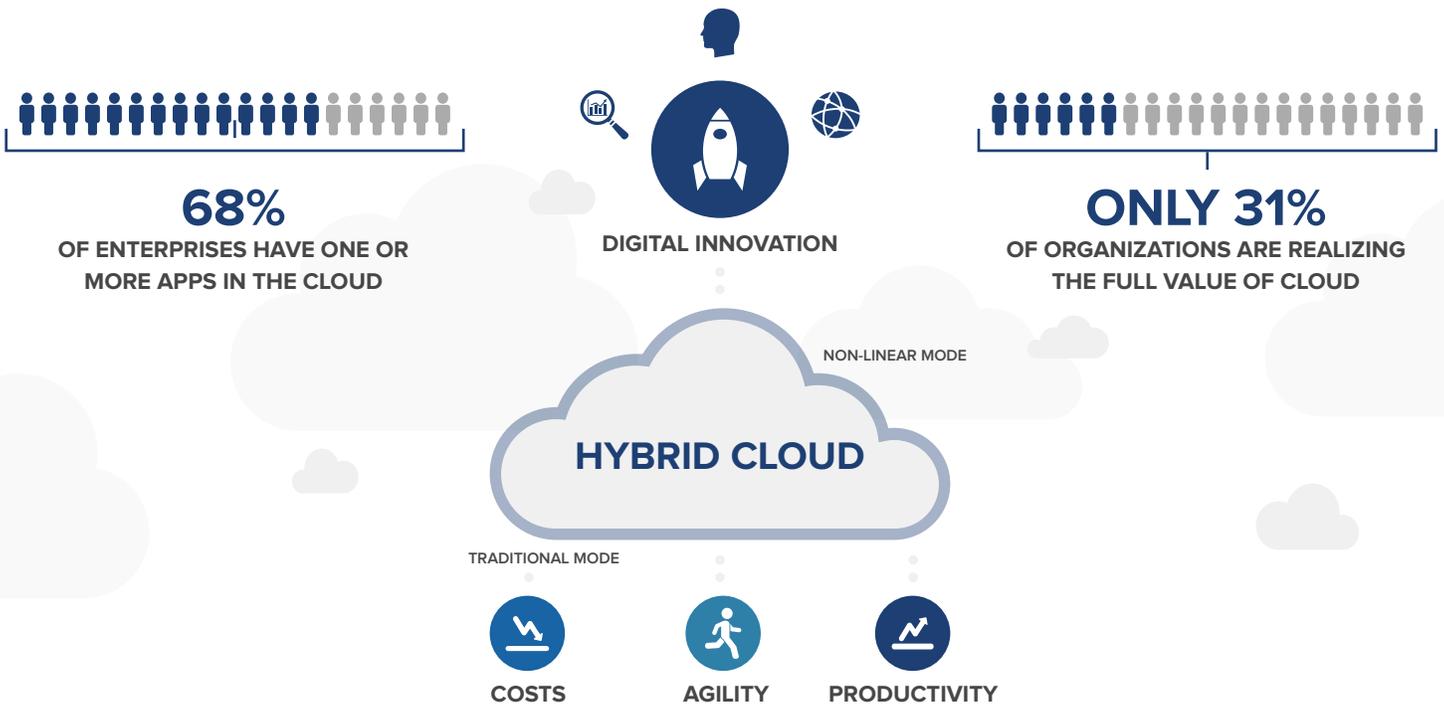
Advanced Services Group

CDI  COMPUTER
DESIGN &
INTEGRATION LLC

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Executive Summary

It is well known that cloud has now become mainstream and adoption has grown year over year with the latest figures showing that 68 percent of enterprises have one or more applications in the public or private cloud. In addition to this, 80 percent of leading organizations with mature hybrid cloud strategies are reporting realization of the associated business values and significant ROI from increased cost efficiencies, business agility and productivity.

Leading organizations are also increasingly leveraging mature hybrid cloud capabilities as the foundation and catalyst for digital transformation. As key product and service innovation are enabled, market expansion through adoption of next-generation initiatives built around advanced capabilities such as data analytics, machine learning and IoT result in the creation of significant competitive advantage for those that can get it right.

However, while cloud adoption is continuing to grow, leading organizations with mature hybrid cloud strategies only represent 31 percent of overall adopters. Meaning many organizations have yet to channel cloud investments into full realization of the substantial business value and return on investment (ROI) that it can provide.

Computer Design & Integration LLC (CDI LLC) aims to help accelerate and de-risk the client journey to realizing the full business potential of hybrid cloud through the CDI Hybrid Cloud Automation Framework (HCAF).

Key Inhibitors to Hybrid Cloud Business Value

While the associated complexities and challenges of cloud adoption are specific to each organization, it spans holistically across the business from people, process, and technology perspectives. Along with being considerably different for smaller and more nimble businesses vs. larger enterprises, several key inhibitors have emerged that are commonly found in different capacities in most organizations no matter the size or type.



Strategy:

Organizations don't always start with a deliberate business-wide hybrid cloud strategy. In fact, 69 percent of organizations' cloud strategies are reported by IDC as ad-hoc, opportunistic or non-existent.

Most initiatives are therefore tactical and driven by individual groups as the need arises, creating pockets of cloud use across the business: resulting in misalignment between lines of business (LOB), IT and unplanned bimodal operating models.

Bimodal operating models are essential for organizations not born in the cloud. But without proper strategic planning, the much-needed modernization and transformation of people, process and technology around cloud is also implemented in an unstructured fashion. This limits realization of business value and significantly increases associated operational costs and complexity.

Defining the right strategy up front is the single most important activity for any company to ensure maximum business value/ROI. This can be seen with over 80 percent of leading organizations with mature hybrid cloud strategies reporting significantly greater increases in top-line revenue and strategic allocation of IT budget.

Alignment:

Misalignment of business and IT is typically a knock-on effect from the lack of a cloud strategy and legacy siloed operating models. It is still very apparent in many organizations and the adage of “build it and they will come” has not proven effective in driving LOB adoption of cloud services.

“IT must run more like a business, for the business. Adoption must be driven top down and IT need to actively engage LOB as an integral part of their hybrid cloud strategy formation to ensure stakeholder and consumer buy in and longer-term adoption.”

Gartner Data Center, Infrastructure and Operations Management Conference, December 5-8, 2016, Las Vegas, NV, Gartner, Inc.

KPI's:

Organizations without a proper definition of success in the form of clear and measurable business, IT and economic KPI's defined at the start (with realistic timeframes) struggle to demonstrate the value of hybrid cloud initiatives.

This in turn limits the much-needed investment for future iterations. Cloud is not a one-time purchase. It is a new and continually evolving operating model that provides services and capabilities in alignment with changing business needs.

Skills:

We are seeing for the first time, CIO's reporting lack of expertise as the number one cloud challenge, supplanting security. This relates to finding resources that have the real-world experience of delivering hybrid cloud and more importantly, transformation in and across large complex organizations in combination with forward looking skills in the form of DevOps and advanced Data Analytics.

Legacy:

Modernization and transformation of people, process and technology around cloud is essential, but often overlooked due to the time and effort it requires to implement and there being no real silver bullet. It is however, one of the most significant levers to enabling realization of hybrid cloud business value/ROI.

Legacy physical environments with only basic virtualization and rigid manual processes and governance, operated within siloed organizational structures greatly limits the effectiveness of automation and increases management complexity. This in turn, ultimately inhibits business agility.

This is also where most organizations are spending the bulk of the budget, and cloud will not “move the needle” in terms of significant cost reduction if a strategic plan to address both the “brownfield” and “greenfield” is not in place.

Standards:

Standards are integral to delivering cost efficiency and agility. Rationalization and standardization across technologies, business/IT processes and services are the key precursors to legacy modernization and transformation, as well as being essential to delivering a high value service catalog via self-service and the repeatability required for effective automation.

Security:

Security is an inhibitor for many organizations. Firstly, in the form of legacy physical network and security models, often creating manual steps as part of automated workflows -- severely limiting the benefits and positive impact of automation in cloud deployments.

Second, without leveraging SDN and modernizing the associated security and compliance policies and processes, cloud use becomes siloed and restricted -- impacting flexibility and potential cost efficiencies.

Maturity:

In addition to modernization of legacy people, process and technology, organizations need to transform and mature their operating models around the twin trends of hybrid cloud and DevOps.

It is necessary to implement mature CloudOps and DevOps organization structures and practices to, not just maximize business value from hybrid cloud, but also to enable hybrid cloud to become the catalyst for digital transformation.

Implementing hybrid cloud in conjunction with mature DevOps practices that span the entire delivery pipeline enable the effective use of containers and microservices architectures, which together simplify deployment and increase frequency, getting new products and services out the door faster. Increasing speed to market significantly.

The CDI Solution:

The CDI **Hybrid Cloud Automation Framework** (HCAF) aims to help clients address these key hybrid cloud inhibitors and accelerate the journey to realizing hybrid cloud business value.

HCAF FRAMEWORK

Accelerates your journey to hybrid cloud business value

METHODOLOGY



A real world, no-nonsense, proven methodology that accelerates realization of hybrid cloud business outcomes and enables agility to pivot with changing business needs.

SERVICES



End-to-end holistic portfolio of services built specifically to address every step of the hybrid cloud journey.

SOLUTIONS

Reference Architectures and use case libraries for private, public and hybrid cloud to reduce cost, risk and accelerate deployment.

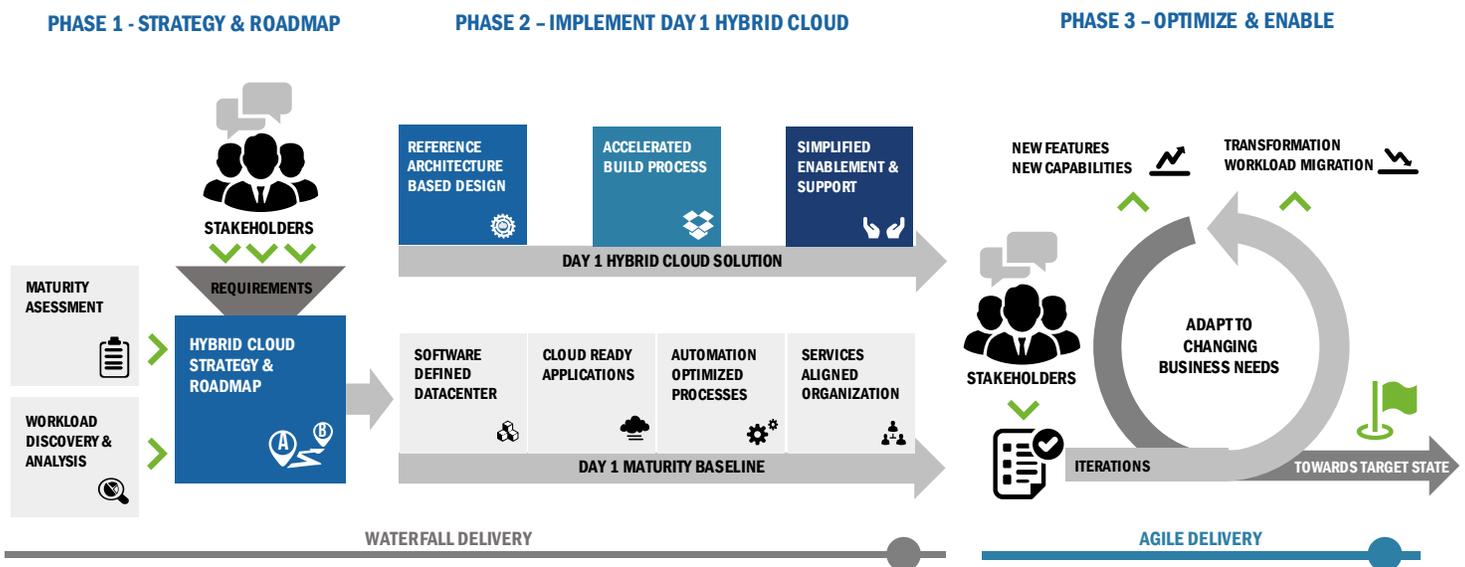


The HCAF framework consists of three parts:

Methodology:

The HCAF methodology is based on real world experience engaging with clients through the good and the bad, of complex hybrid cloud and transformative engagements.

The methodology has been designed to be no-nonsense, simple, and as lean as possible and is centered on accelerating the maturity of a client's hybrid cloud strategies, driving alignment of business and IT and reducing risk. Ultimately, it ensures business outcomes are delivered from hybrid cloud adoption.



The HCAF methodology is broken down into three phases:

PHASE 1: STRATEGY AND ROADMAP

Phase 1 starts with a maturity assessment. This is lightweight and ascertains a high-level understanding of the organizations current state across infrastructure, applications, tools, network/security models, processes and organization structures.

A deeper analysis of workloads is then conducted to understand applications and their supporting architectures, interdependencies, and business classifications. This enables identification of key gaps and risks early in the process, starts to assess workload suitability, defines placement for hybrid cloud, and identifies a strategy and roadmap for core or critical applications.

User centric interviews and workshops are then conducted with business and IT stakeholders to envision, identify, validate, and prioritize business opportunities for hybrid cloud along with defining a strategy, target state, roadmap, business case and plan for execution.

The key benefits of Phase 1 are:

- Business outcomes focused
- Aligns the business and IT around strategic initiatives
- Reduces complexities and risk
- Determines use-cases with the best combination of business benefits and implementation feasibility
- Provides evaluation framework for workload placement
- Provides visibility of required investment and timeframes up-front

PHASE 2: IMPLEMENT DAY 1 HYBRID CLOUD

Phases 1 and 2 are delivered in a waterfall delivery approach. In Phase 2, CDI LLC leverages its solutions architectures and use case libraries to accelerate the design and build processes and simplify enablement and support of a day one hybrid cloud solution.

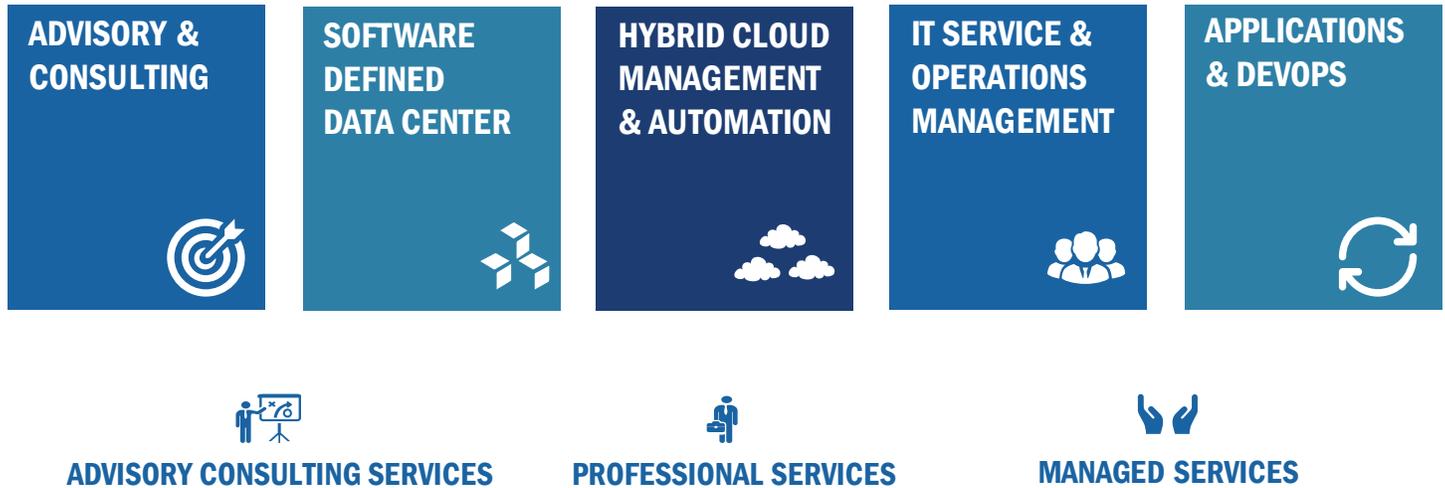
A parallel program of work is also defined to ensure key baseline maturity gaps are addressed across infrastructure, applications, tools, processes and services. Ensuring infrastructure is software defined, that target applications are cloud ready or cloud aligned, that core processes are optimized or rewritten for automation, and that standard services and cost profiles have been defined. These are key dependencies to ensure hybrid cloud delivers not just short term, but long-term business value.

PHASE 3: OPTIMIZE AND ENABLE

Phase 3 is conducted under an agile delivery approach. Once the day one hybrid cloud capability has been delivered, CDI LLC leverages the input, strategy and roadmap framework from Phase 1 to define future phases in smaller iterations focused on rapidly delivering new features and capabilities for the cloud solution, and implementing change programs in the form of modernization, transformation and migration activities. Working in this way enables clients to embrace change and adapt to business needs as they arise, but instills the necessary structure to ensure results are delivered, risk is managed and strategic alignment is maintained across the business.

Services:

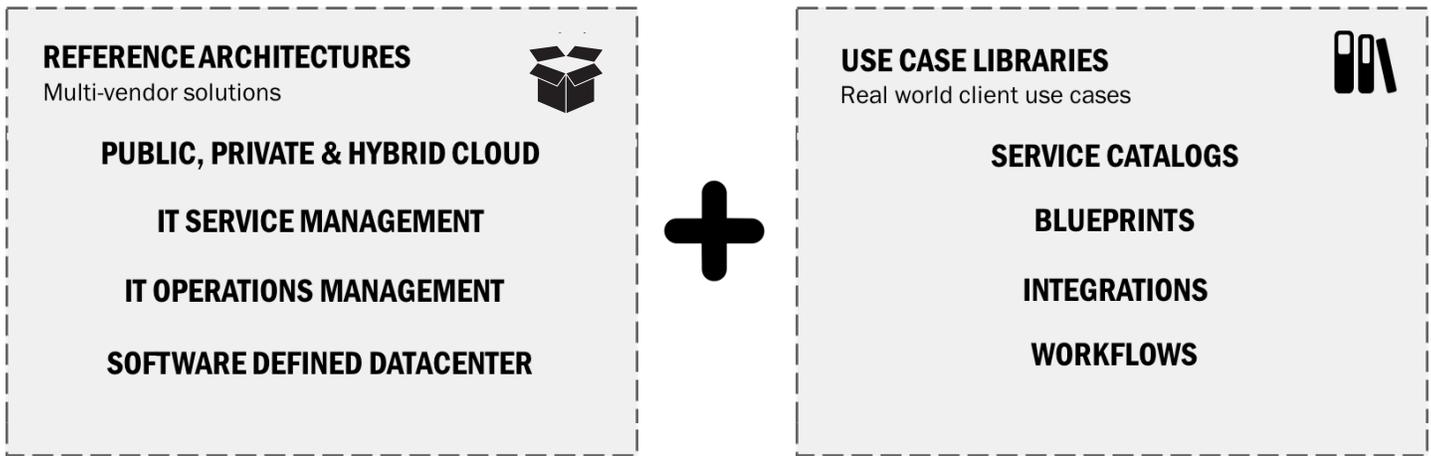
The HCAF services portfolio has been built from the ground up by a team of cloud and DevOps experts within CDI LLC's Advanced Services Group (ASG), centered on the client journey to hybrid cloud and applicable no matter the maturity level.



Services range from Advisory and Consulting, Software Defined Data Center, Applications and DevOps, IT Service and IT Operations Management to Hybrid Cloud Management and Automation. Value is delivered here through complete integration and alignment of offerings to the customer journey along with strong expertise and experience of delivering strategy, hybrid cloud on SDDC, with ITSM, ITOM and DevOps all integrated into one holistic multi-vendor solution.

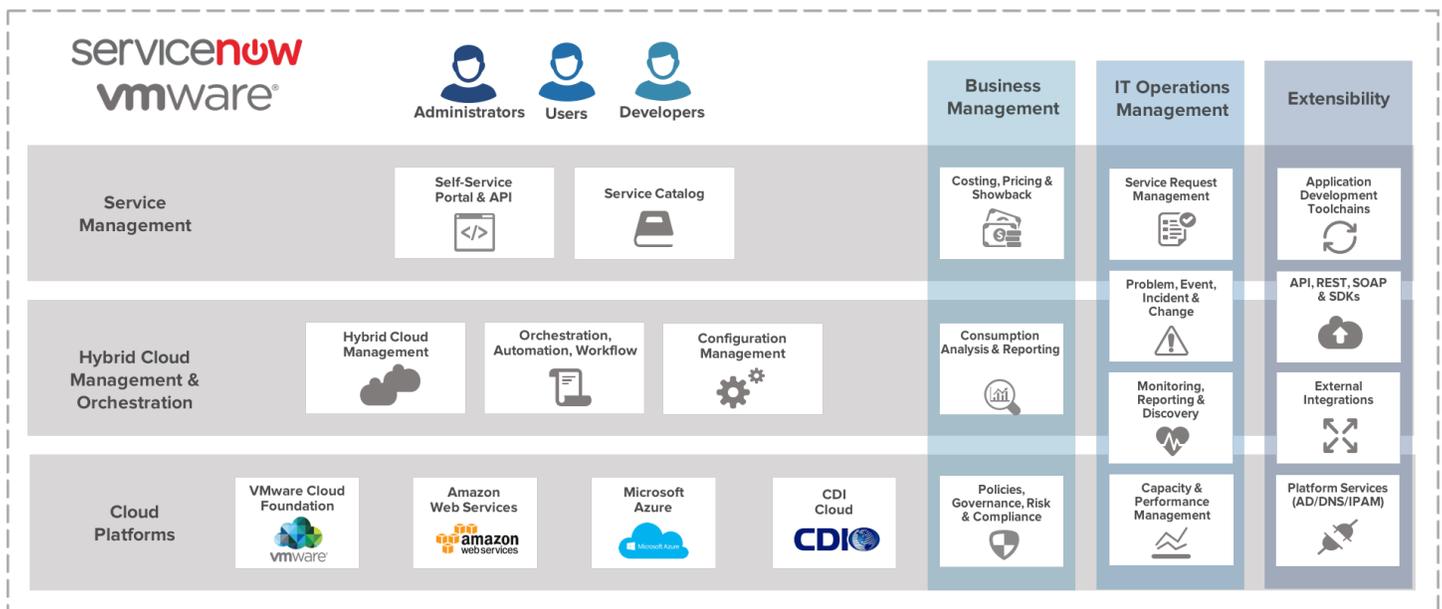
Solutions:

HCAF is comprised of solutions architectures and use case libraries developed in conjunction with key partners for hybrid cloud, ITSM and DevOps. Combined, they help to accelerate deployment and reduce the associated costs and risks, alongside enabling better workload placement decisions to public, private and/or hybrid cloud.



SOLUTIONS ARCHITECTURES: HYBRID CLOUD

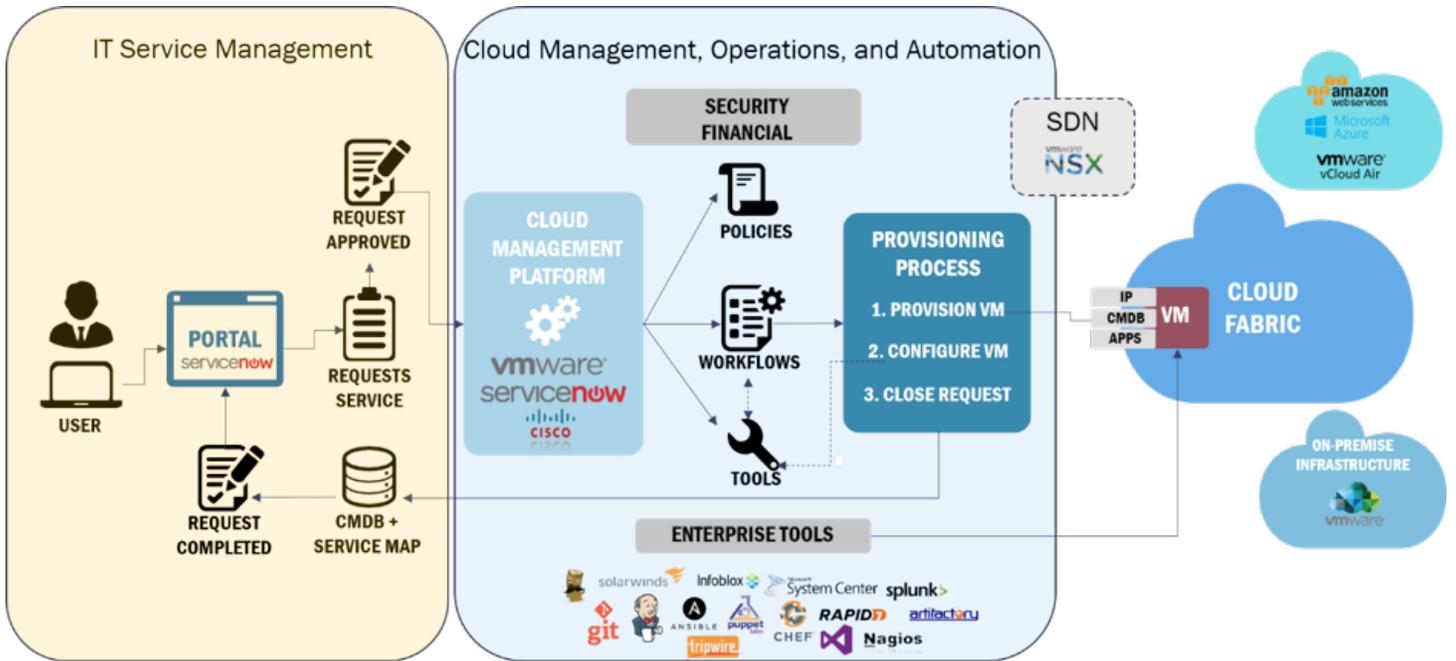
CDI LLC has partnered with industry leading vendors, ServiceNow and VMware, to create holistic and extensible hybrid cloud solutions architectures for HCAF. These have been developed around real world client hybrid cloud business/IT needs and use cases, enabling CDI LLC to rapidly deliver day one cloud capabilities into clients.



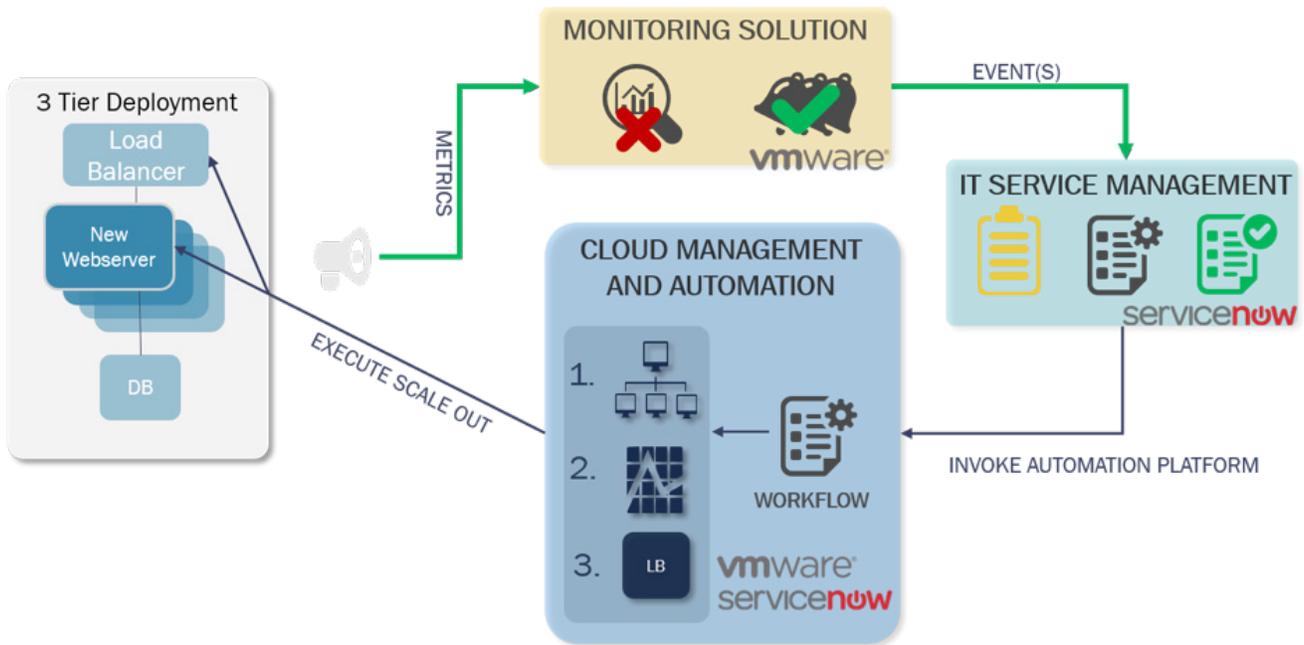
USE CASE LIBRARIES: HYBRID CLOUD

In combination with the hybrid cloud solutions architectures, use case libraries have been developed to include common service catalog items, blueprints, systems integrations and workflows from real world engagements which can be leveraged by clients to reduce the cost and time to deliver tailored solution features and capabilities beyond the “out-of-the-box” experience.

HCAF USE CASE EXAMPLE: SELF-SERVICE APPLICATION PROVISIONING



HCAF USE CASE EXAMPLE: CONDITION BASED AUTO SCALE-OUT



Key Benefits



ACCELERATES TIME TO VALUE AND ROI

We can significantly reduce the time for a customer to define a mature hybrid cloud strategy, align lines-of-business and IT, and rapidly deploy hybrid cloud solutions to deliver maximum business value/ROI.



REDUCES COST, RISK AND COMPLEXITY

Our experience, reference architecture and use case libraries help clients to drive standardization and lower the cost, risk and complexity of implementation and support.



ADDRESSES THE ENTIRE JOURNEY TO HYBRID CLOUD

Our holistic framework addresses both business and technical transformation needs no matter the client maturity.



ENABLES AGILITY TO ADAPT TO BUSINESS NEEDS

Our methodology enables clients to implement an agile program delivery model enabling short iterative phases that can quickly adapt to changing business needs.

For more information about CDI's HCAF, please visit www.cdillc.com/hcaf.

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