virtana

Services Brochure

# Cloud Migration Readiness (CMR)

## Customer Challenges – Digital Transformation – Cloud Disruption

The "Cloud" promises IT organizations unprecedent value in the form of business agility, faster innovation, superior scalability and most importantly - cost savings. For many organizations, it is at the core of their IT digital transformation strategy. It is a disruptive force that requires application workload behavior knowledge, careful planning and collaboration from knowledgeable, trusted advisors.

As a first step, enterprises frequently target a subset of their less critical on-premises applications for migration to the public cloud. Typically, organizations will take one of two paths to the cloud.

A. Going cloud native. Rewrite your application to use resources offered by a cloud provider.

B. Lift and shift. Very minimal or zero code changes to the application. Largely, just replicate the application in the cloud.

The faster time-to-production choice is to "lift and shift" the targeted applications to a Cloud Service Provider's Infrastructure as a Service (IaaS). In the lift and shift option, the advantage is reduction in the cost incurred in the physical infrastructure like hardware, floor space, cooling, security etc. and the management of that infrastructure. Savings will differ depending on your unique computing resource needs, workload refactoring and business models.

Even in its simplest form, IaaS migrations must be carefully planned requiring answers to some fundamental questions:

1. Will my application perform as expected in a public cloud? (Application Fitness)
2. How much will it cost to run my applications in a public cloud? (OpEx)
3. Which cloud service provider is the best choice for my applications? (Cost and Fit)

IT managers need answers to these questions before the actual migration is performed. As most internal IT organizations don't have deep cloud expertise, the question becomes who you can trust to provide you with the answers – to help you make better business decisions.

## Cloud Migration Readiness - Providing Answers Before Cloud Migration

Virtana Cloud Migration Readiness (CMR) service provides the answers to your key questions before the actual migration takes place. The CMR service prepares you with vital insights into your applications and workloads targeted for cloud migration.

Specifically, the Virtana CMR service provides answers to the following questions:

- How do I know which workloads to migrate and which to retain in the data center?
- How do I choose the best cloud service providers for my applications?
- How do I simplify the analysis and reduce the time to migrate a large number of diverse workloads?
- How do I select the optimal CPU, memory, network and storage configuration for each migrated workload rather than simply replicating my on-premise configurations?
- How do I test cloud workload performance before migrating the workloads?
- How do I prevent migrated workloads from having unforeseen dependencies back to the data center?
- How do I determine if migrated workloads are performing adequately and what can I do if they aren't?

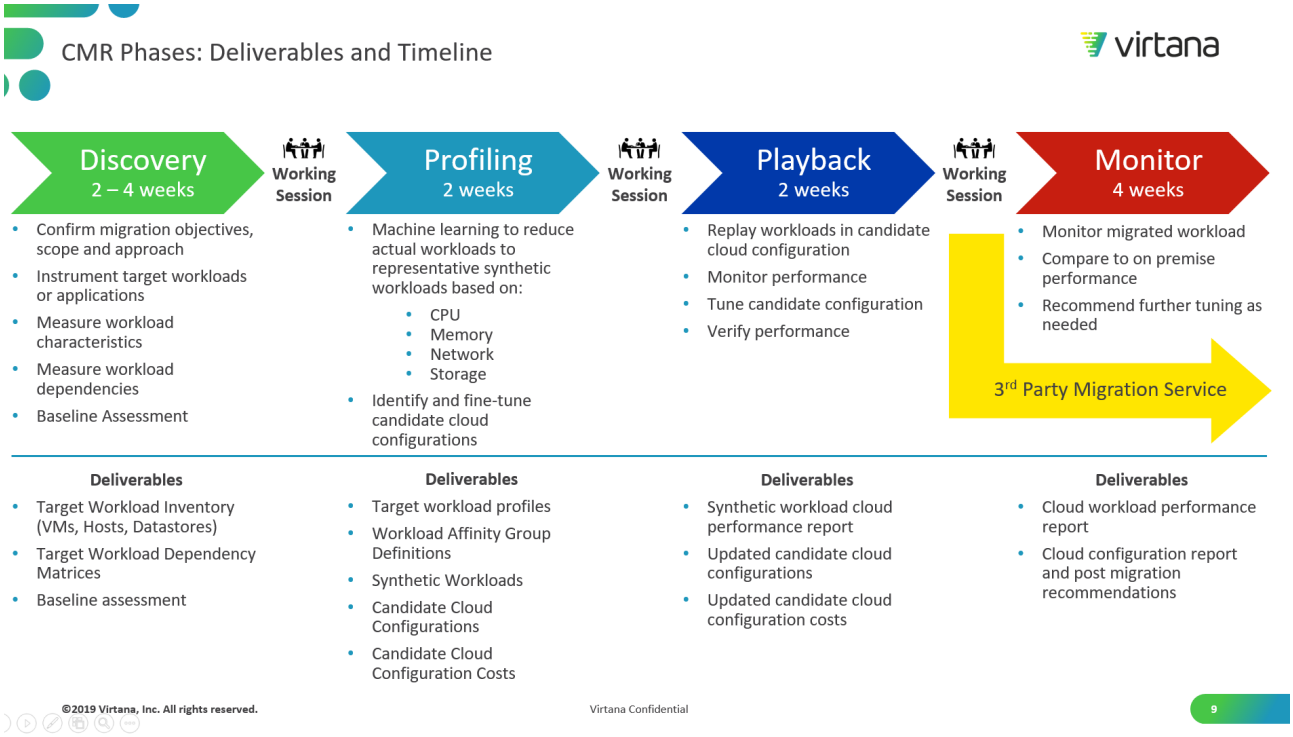
The CMR service takes advantage of over 10 years of field experience helping the largest Global 1000 IT enterprises with infrastructure performance management and application workload analytics. Our VI CMR experts will help de-risk your cloud migration by validating the suitability of the targeted applications based on their on- premises performance SLAs, their dependencies, the preservation of performance in the Cloud, and the estimated cost – all before migrating the actual applications to the cloud!

## CMR Implementation Phases

To successfully reduce the cloud migration complexity, right-size cloud configurations, and to validate cloud performance, CMR defines four distinct phases:

1. Discovery - Discover application workload characteristics and identify dependencies between compute, networking and storage elements.
2. Profiling - Distillation of hundreds or thousands of workloads into a small set of representative synthetic workloads that accurately characterize performance.
3. Playback - Accurate playback of representative synthetic workloads in the cloud to select cost-optimal configurations and placements without compromising workload performance.
4. Monitor - Monitor actual workloads post migration to the cloud to identify any unforeseen performance or capacity issues.

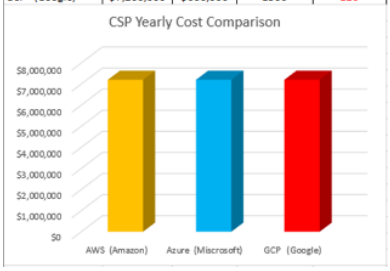
Figure 1 below, shows a brief description of the tasks, deliverables and estimated time-frames for each phase. Also, note the phase handled by a 3rd party provider who performs the actual "data movement" and cloud configurations based on the recommendations provided by CMR's outputs and deliverables.



## CMR Example Deliverables

The final deliverable consists of a cloud service provider comparison and their respective cloud configurations.

| Cloud Service Provider | Yearly Cost | Monthly Cost | FIT # of workloads | UNFIT # of workloads |
|---|---|---|---|---|
| AWS (Amazon) | $7,200,000 | $600,000 | 1500 | 120 |
| Azure (Miscrosoft) | $7,200,000 | $600,000 | 1500 | 120 |
| GCP (Google) | $7,200,000 | $600,000 | 1500 | 120 |




| Workload | AWS Type1 | OS | AWS Option1 Cost on-demand | AWS Option1 Cost reserved | AWS Type2 | AWS Option2 Cost on demand | AWS Option2 Cost reserved | Storage Type | Cost $0.10 per GB-Month |
|---|---|---|---|---|---|---|---|---|---|
| Appdiscovery_540009_PrivateKeyCl | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| BETA 5.4.0-540060 - Configuration T | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| malhar-vw-56d | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| malhar-vw-56c | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| malhar-vw-56-master3 | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| malhar-vw-56-master2 | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| malhar-vw-541c | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| services1.ova | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| webserver.ova | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM012-522 | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM014-523-2TB | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM015-523 | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| databases.ova | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM020-541-64gig | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| VISA-TEST-VWS-API-DD02 | t2.2xlarge | Unix | $0.37 | $0.23 | m5.2xlarge | $0.38 | $0.245000 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM019-523 | M4.4xlarge | Windows | $1.54 | $1.23 | M5.4xlarge | $1.50 | $1.23 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM003-523 | M4.4xlarge | Windows | $1.54 | $1.23 | M5.4xlarge | $1.50 | $1.23 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM008-522-2TB | M4.4xlarge | Windows | $1.54 | $1.23 | M5.4xlarge | $1.50 | $1.23 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM009-522-64G | M4.4xlarge | Windows | $1.54 | $1.23 | M5.4xlarge | $1.50 | $1.23 | General Purpose SSD | 0.1 |
| VI-SVCS-VW-VM017-523 | M4.4xlarge | Windows | $1.54 | $1.23 | M5.4xlarge | $1.50 | $1.23 | General Purpose SSD | 0.1 |

### Engaging Virtana

Whether you are exploring the cloud or have a current cloud initiative, the CMR service will work with your partners or directly for you. Either way, CMR will put you in control of your “lift and shift” cloud migration. Stop guessing and start knowing!

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