



/ WHITEPAPER /

ENABLING ENTERPRISE ADOPTION

A position paper for AWS build or buy considerations.
By 2nd Watch & Melbourne IT Enterprise Services.

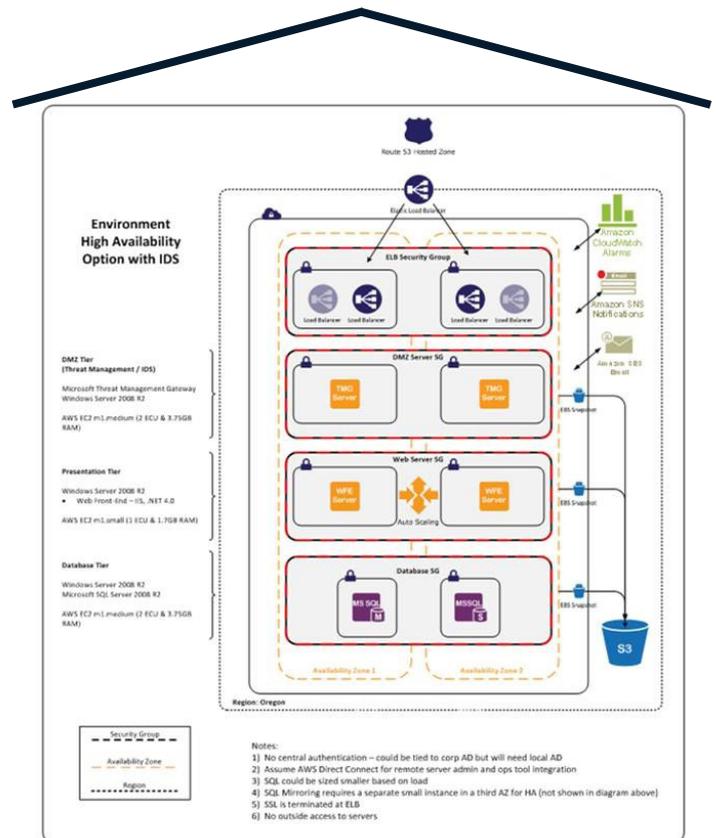
INTRODUCTION

Many enterprises contemplating public cloud deployments are going through a classic decision-making process applied to many new infrastructure technologies: *Do I build it myself or do I buy it from the professionals?* Arguments can be made for both approaches. However, to develop the right strategy and frame the build or buy debate, several considerations need to be made when it comes to Infrastructure as a Service (IaaS), and in particular Amazon Web Services™ (AWS).

An easy to understand analogy for developing a framework to help determine whether to build or buy is to take an approach similar to deciding on how to build a new house. Using this analogy you can look at “the house” as the environment or platform in AWS within which your application will reside. Or in the case of a very large enterprise, it might be viewed as a large commercial apartment building that houses many different applications.

For your cloud implementation, AWS provides you the raw materials to build the house, and in our opinion has the best performing and lowest cost building materials. AWS compute, storage, networking, auto scaling, VPC and other AWS services can be looked at as the concrete, lumber, nails and other building materials. It is up to you and your team, or your key partners, to take those materials and construct the house that meets your needs for your budget, space, comfort and build quality requirements. AWS is not in the business of building houses but expects either you or a partner to design, build and operate your application platform.

In this context, you and your team need to ask yourselves, “*What are the things we need to think about to ensure that the house or building we ultimately construct meets our needs?*” And just as importantly, “*Does our organization have the skills, experience and resources to design, finance, build, maintain and insure the house we want to build?*” Lastly, to effectively apply this analogy the question “*What are the things we need to get done in order to build the house we need?*” needs to be asked and the responses analyzed.



To answer the last question above, whether it is truly applied to building a house or theoretically applied to building an AWS-based applications platform, we see very common themes around four major decision point areas: **Design, Construction, Maintenance and Insurance.**



ENABLING ENTERPRISE ADOPTION: AWS BUILD OR BUY CONSIDERATIONS

DESIGN

As with any system composed of a variety of components, a house needs to be designed to deliver a certain level of performance. Things to consider are space, comfort, longevity, protection from the elements and other design considerations. Simply buying the concrete, lumber, nails and other building materials will not get you a desired performance level without a solid design. Or in other words the lumber does not design itself into a house.

This holds true with AWS building blocks as well in that you must take them and design your own platform. Consideration needs to be given to capacity, reliability, availability (including the required SLA level for the entire platform) and resilience (RTO/RPO). Much like building the house, these are things that you do not get by simply selecting the right building materials – they come from ensuring that you have the right design, which is something that you do yourself if you are building it yourself, or you have your architect or designer guarantee.

In addition, features unique to cloud infrastructures such as auto scaling enable very different designs which deliver significantly more benefits than traditional architectures. Or in other words, some of these building materials are radically different than traditional wood and nails. So you have to ask yourself and your team: *“Do we have the resources, experience and skillset to design a house ourselves that delivers the performance we need?”*

CONSTRUCTION

The construction part of this analogy is probably the simplest to understand. While some of us have the skills to pour the concrete for the foundation, put the lumber together to build a frame and walls, install the windows, and complete the multitude of other tasks involved with building a house, the majority of us don't have these skills. This holds true with building applications platforms in AWS today. Many IT architects and engineers are not familiar with the AWS building blocks and how to put them together to build a reliable, scalable, redundant and cost effective applications platform, so you have to ask your team if they are really the best people to take an AWS based application platform design and do the build.

MAINTENANCE

As with any home there are maintenance items most of us do ourselves. However, when specialized or larger maintenance tasks are required we often call in contractors that have unique tools and skills. Very few of us will move walls, build new bathrooms or add extensions to our homes. The contractors know how to take the basic building blocks like concrete and lumber to either repair the home or build on to it. This holds true with AWS as while it provides great raw materials, either your team or your partner needs to be able to work with the AWS building blocks to repair or enhance an application platform.

Additionally, ensuring that the home does what you need it to do, like stay warm in the winter, dry in the rain and keep unwanted intruders out, is not the responsibility of the manufacturer of the heating system, roof and locks. As the homeowner these things are your responsibility. You need to put process and systems in place that assure you the home is functioning, dry and safe. So you need to be prepared to ensure that both the systems that make up the home are functioning as they should, as well as monitor the entire home to ensure that all the systems are working together.

Some of us do the monitoring of our homes ourselves, but many of us rely on alarm monitoring companies to remotely watch our homes for alerts for fire and intrusion. This analogy applies well to applications running in AWS as while it provides great feedback on how the AWS core services are functioning, AWS cannot ensure that your entire application platform, which consists of many of these core services building blocks, continues to function as it should. You need to be able to determine if the entire applications platform is running and if it is running at the speed, capacity and scalability required to meet your SLAs. If it is not, you need to have the ability to step into both the applications platform and underlying AWS components in order to troubleshoot, diagnose and fix the problems. This is a job for your team or your partner, and you have to ask yourself if you have the right team to ensure that the entire application platform can be maintained, monitored, repaired and enhanced.



ENABLING ENTERPRISE ADOPTION: **AWS BUILD OR BUY CONSIDERATIONS**

INSURANCE

This part of the analogy is a bit more abstract, but still applicable to the decision framework. We buy insurance for our homes to protect us from damage and theft. Or in other words we are ensuring that the home does what it needs to for us, regardless of external influences. We need a place to live that ensures us a certain level of comfort and security. We pay money to our insurance company to provide these things at the required level in the event of a problem with the home. This can be compared to our application platform and ensuring that it delivers the necessary security, availability, reliability, resilience and capacity. While AWS will provide SLAs for its underlying core services, it will not provide an SLA (or in the case of our analogy, a level of “insurance”) for your entire applications platform. It is up to you or your team to do this, or you can look to a partner to provide a targeted performance level.

Hopefully this analogy and framework gives you a tool which you and your teams can use to determine if building an application platform in AWS makes sense, or if it is a better decision to enlist the help of a partner to design, build and manage your AWS infrastructure. As you can imagine we feel strongly that it makes more sense to work with a partner that has the specialized skills and experience to help you build your house!

Melbourne IT Enterprise Services designs, builds and operates custom cloud solutions for Australia’s leading enterprises. Its expert staff help enterprises solve business challenges and build cultures that enable organisations to use technology investments efficiently to improve long-term value. With more than 15 years’ experience in delivering managed outcomes to Australian enterprises, Melbourne IT has been long associated with enabling success. Its certified cloud, consulting, and security experts repeatedly deliver results. This is why so many of the brands you already know and trust rely on Melbourne IT.

2nd Watch is an enterprise workload management provider that helps companies accelerate data center capacity growth through adoption of the public cloud. The company’s public cloud-native services and tools implement and automate critical workload management processes including migration, procurement, provisioning, operations, financial management, and governance. 2nd Watch has helped hundreds of customers increase agility and lower operation costs by shifting workloads into more than 75,000 instances in the public cloud. The venture-backed company is headquartered in Seattle, Washington.



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