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A Strategic Audit of Microsoft Azure

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Abstract

This paper looks at Microsoft Azure's current strategies and proposes possible options for the future. It looks at several competitors and explores how Azure will affect and react to Microsoft’s vision.

Background

Microsoft Azure is one of the fastest growing groups at Microsoft. With a 91% increase in revenue in 2018, Azure is aiming to revolutionize software. Azure has extremely diverse customers, helping sub-Saharan African households establish a credit history, connecting divers working to protect coral reefs, and improving outcomes for more than 15,000 children in foster care (Nadella, 2018).

Azure currently supports over 90 percent of the fortune 500 companies in the world (Guthrie, 2018). There are more than 880 thousand companies using Azure. In addition, many United States local, state, and federal agencies use Azure to replace their legacy infrastructure with a more modern solution (Government Cloud Computing, 2019).

But what is Azure? Azure is Microsoft's cloud offering. It allows customers to buy storage space, computing power, or host websites. Azure is scalable – it works if a company has 10 users or 1 million.

Azure has recently been making more moves in gaming. Azure has provided support for game developers for years – hosting multiplayer games, distributing content, and managing save game sync (Azure Gaming-Cloud, 2019). Now they're trying something new – Project xCloud. Project xCloud is a game streaming service that will use Azure compute resources to allow users to play games on any device.

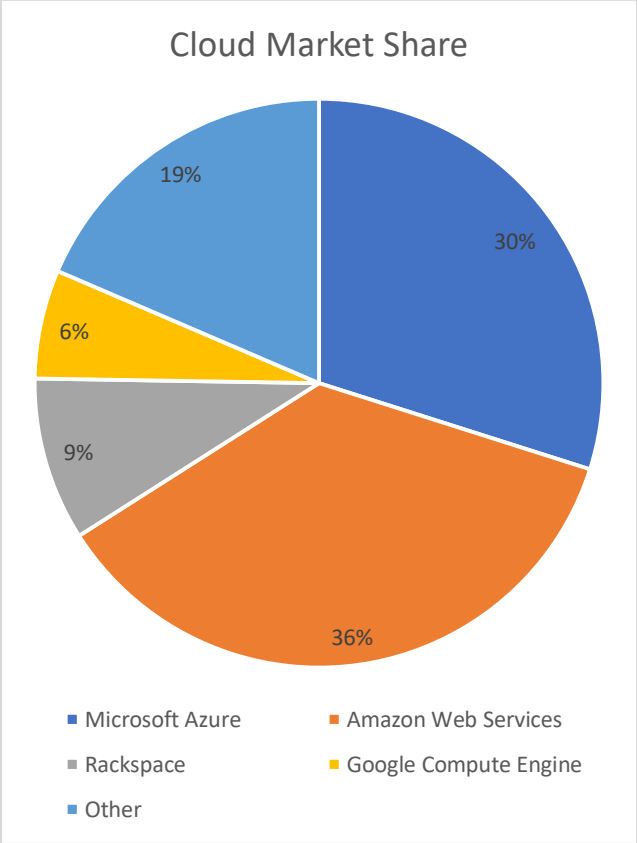
Community outreach is also important to Azure. Azure for NonProfits is a program that allows nonprofits and charities to gain $5000 a year in free Azure credit. This helps them spread their message and fulfill their mission. It also matches well with Microsoft's mission:

"Our mission is to empower every person and every organization on the planet to achieve more."

Situational Analysis

Market Share

Microsoft azure is currently among the top two cloud platforms on the market. With over 888,000 companies using Azure, it has about a 30 percent market share, slightly behind Amazon Web Services' 36 percent. Both Amazon and Microsoft are far ahead of their other competitors, with only Google and Rackspace (an American cloud company based in Texas) having more than 5 percent market share. The remaining 19 percent of the market is split between more than 150 other minor players in cloud computing (Top 5 Products, 2019).



Finances

Azure revenue in 2018 exceeded $23 billion - $3 billion more than the $20 billion goal. This is also only 3 billion less than Amazon Web Services $26 billion in 2018 (Griswold, 2019). Azure currently comprises over 20 percent of Microsoft's total revenue and has a Gross Margin of 57 percent.

Advantages

Integrations

One of Azure's biggest advantages is its connection to Microsoft. Microsoft is a very strong brand in B2B sales. This makes it easier for Azure to market itself to other companies, smoothly integrating with existing products. Some old Microsoft products like Active Directory were smoothly transferred to Azure

without affecting the customers. Office 365 – what Microsoft office products like Word, Excel and Outlook are now purchased through – uses Azure to sync user's data.

Another major integration advantage Azure has is Visual Studio. Visual Studio is software sold by Microsoft that helps developers create new software. As the most used development platform, with 23 percent of developers using it, Visual Studio is a major driver of Azure usage (PYPL, 2019). Visual Studio has extremely good Azure integration, allowing users to deploy their app with the click of a single button, circumventing the traditionally painful deployment process.

Cloud + AI

One of Azures biggest advantages is its AI integration. All of Microsoft's innovations and breakthroughs in AI are available on Azure. These offerings are currently broken down into 3 major groups: Knowledge Mining, Machine Learning, and AI app and agents. Knowledge Mining uses sentiment analysis and clustering to discover patterns and relationships, extract key phrases and create new insights into customer's data. Machine Learning allows companies to make predictive models to better follow trends. AI apps and agents offers several customizable pre-trained models, such as vision, speech, language and search. It also offers customizable chat bots that will interact with customers.

Disadvantage

One of Azures biggest disadvantages is Amazon Web Services' (AWS) first mover advantage. AWS, released on March 14, 2006, beat Azure, released February 1, 2010, to market by almost 4 years. Cloud services tend to lock customers in, since there are typically high transition costs to switch.

Current Goals

Azure is currently trying to expand more into the startup sphere. Initially Azure focused on large corporations, leveraging existing connections to gain traction. Now, Azure is marketing itself to startups, offering scaling infrastructure that a growing startup needs (Azure for Startups, 2019).

Leadership

Lead by CEO Satya Nadella, Microsoft as a whole has been focused on maintaining a growth mindset. This means always looking for new opportunities and ways to improve. This is illustrated well by Project Natick – a project that drops a 38,000 pound container full of computers into the ocean. Project Natick plans to use the ocean to cool the CPU's used by Azure. This kind of out of the box thinking is encouraged by Microsoft's leadership, allowing innovation to thrive.

Scott Guthrie is the executive vice president of the Microsoft Cloud + AI division, which Azure falls under. Guthrie takes a customer first approach and wants to make Azure as easy to use and ubiquitous as possible. "We focus Azure innovation really on your needs, on making cutting edge technology approachable for all developers and doing the heavy lifting" (Guthrie, 2019). Security is also an important topic. "Trust is a core value of Azure and we lead the industry in our work around security, compliance, privacy and responsibility" (Guthrie, 2019).

Potential Strategies

GitHub Integration

Microsoft recently acquired GitHub, the world's largest open source code hosting website. GitHub contains millions of lines of code – most of it needing to be hosted. This presents a huge business opportunity for Azure. Providing a similar integration to Visual Studio's – a simple, one-click deployment – will create a steady stream of new customers. Microsoft already has ways to link a GitHub account to an Azure (Microsoft) account. This proposed integration would take two forms: a "Deploy Now" button on GitHub that streamlines the deployment process, and a new page in the Azure developer portal. This new page will list all of the users GitHub projects and allow them to quickly and easily deploy them. This integration serves two purposes. It introduces programmers who may not have thought of using cloud

hosting to Azure, like university students working on a school project or companies planning to self-host. It also provides a clear, marketable competitive advantage over Amazon Web Services.

Legacy Support

One of Microsoft's biggest strengths has always been its backwards compatibility and legacy support. One of the biggest challenges with programming is maintaining and updating applications. Microsoft has a history of providing stability. Nearly all of Microsoft's products have a ten year lifecycle guarantee, which gives developers confidence that their software will be useful for at least ten years – a very long time in the world of software (Microsoft Lifecycle Policy, 2019). Azure can provide a similar guarantee for its cloud offerings, promising that each offering will be available for at least ten years.

Simplified Website Creation

Currently Azure only caters to a technical audience. If someone knows how to design and program a website, Azure will host it. It does nothing, however for non-technical users. Companies like Squarespace provide simple website creation and deployment with no technical knowledge required by providing templates and simple modification tools. Other notable examples of this are Wix and WordPress.org. While Wix offers a similar service to Squarespace – creation and hosting – WordPress only offers the creation tools. Since WordPress is open source, Azure can use (and contribute to) WordPress' codebase (Balkhi, 2018). With the deployment framework Azure already has in place, it would be relatively simple to open it up to a broader audience. Therefore, one potential strategy for Azure is to create a similar service to Squarespace – simplified, non-technical website creation and deployment.

Recommendations and Justifications

Since none of the potential strategies outlined above are mutually exclusive, the following section will rank the strategies by their potential positive impact outweighed by their risk. The main evaluation criteria will be potential revenue increases, with secondary benefits – such as community outreach – considered as well.

1. GitHub Integration

This is by far the best new product Azure can offer. Simple deployment directly from GitHub will pull in new users and provide a clear advantage over Amazon Web Services. It will also provide a quick return on Microsoft's $7.5 billion investment in acquiring GitHub.

GitHub Integration also has secondary benefits besides creating new customers for Azure. For example, youth development and outreach is a big focus for most of the top software companies, and Microsoft is no different. Microsoft believes, "In a world being transformed by technology, all youth should have the opportunity to develop the creativity, critical thinking, and problem-solving skills gained by learning computer science" (Nonprofit & Education, 2019). Being able to deploy straight from GitHub would allow kids to immediately see their websites online.

2. Continue Investing in AI

AI has been a major driver for Azure since they combined. AI allows Azure to continue to offer new, innovative solutions to customers problems. It is a major point of competition with Amazon Web Services, with both Azure and AWS trying to provide the best machine learning solutions. Clearly outperforming AWS in AI would be a huge boost for Azure.

Additionally, AI may be the future of computing. Staying at the forefront of this rapidly evolving field will be beneficial not only to Azure, but to Microsoft as a whole.

3. Simplified Website Creation

Since it would reach out to more users, creating a simple way to create and host websites is a fairly good way to go. Services like Squarespace and Wix are profitable, with Squarespace bringing in $300 million in revenue in 2018. It also has a large impact on the internet community. WordPress creates 30% of all websites (Mening, 2018)!

This also improves Microsoft's charitable outreach. Although Microsoft offers $5000 a year in free Azure credit to non-profits and charities, many non-profits lack the technical know-how to utilize it (Hester, 2018). By creating a simple way for non-technical users to use Azure, more charitable organizations will use Azure. This is important since Microsoft is, "committed to delivering technology solutions that are accessible and affordable for nonprofits everywhere" (Microsoft for Nonprofits, 2019).

4. Legacy Support

This is the riskiest of the options. While promising to maintain all of its current offerings would be a huge draw for risk averse customers, it could also be a huge drain on resources, preventing Azure from shutting down less profitable services to focus on more successful or new offerings. Microsoft experiences this when they released Microsoft Edge while IE11 still had 6 years left in its lifecycle. Instead of replacing IE11, Microsoft was forced to dedicate resources to maintaining it.

The risks of this proposal outweigh the potential gains. Therefore, it should not be implemented.

Implementation Timeline

Within 3 Months:

- Form a team dedicated to creating and maintaining the proposed GitHub Integration
- Increase R&D in AI by 20 percent
- Begin integrating WordPress into Azure

Within 12 Months:

- The integration team should have finished development and switch to maintaining
- Continue R&D into AI
- WordPress should be integrated. If there isn't much traffic, begin minor advertising

At 6 years:

- AI is to volatile to predict at this point. Re-evaluate and react appropriately

Contingency Plan for GitHub Integration

The biggest risk for GitHub integrations with Azure is community backlash. Although there was plenty of positive feedback about the Microsoft acquisition of GitHub, there was considerable backlash as well. The announcement tweet had responses like, "You have my code but you will never have my soul", "*insert meme that Microsoft will kill github here*", and most importantly for Azure, "The day github will be renamed or move it to office 365 or azure platform its time for migrate to @gitlab" (). The best way to avoid or minimize this risk is to keep the integration unobtrusive. If it is a simple button, it will be easy to remove if there is significant community backlash against it. Another way to minimize backlash is to offer discounted rates for the first few months when deploying through GitHub.

Another risk is technical failure. Microsoft could fail to make the integration work. This is extremely unlikely due to Microsoft's expertise in this field, but if it does the integration can be quietly buried as a failed project.

Honorable mentions

Quantum computing is a fascinating field of study that Microsoft is also engaged in. If the Microsoft quantum computing project is successful, Azure could sell quantum servers in the future.

Conclusion

Azure is currently extremely successful as a division of Microsoft. With revenues almost doubling last year, Azure is flying high. Still, there are several things it can do to improve. The most significant opportunity is an integration with the newly acquired GitHub, reaching GitHub's 28 million users and 57 million codebases. Continued AI research will help Azure maintain its rapid growth and simplifying website creation will allow Azure to reach more customers. Overall, Azure is in a strong position to continue to grow. Azure will continue helping Microsoft, "Empower every person and every organization on the planet to achieve more."

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