

THE BUSINESS VALUE OF CLOUD-ENABLED MANAGED HOSTING

RACKSPACE HOSTED SOLUTION DEMONSTRATES POTENTIAL TCO SAVINGS OVER A SELF-MANAGED ON-PREMISES DATACENTER APPROACH VIA INFRASTRUCTURE COST SAVINGS, LOWER PERSONNEL COSTS, & IMPROVED SERVICE LEVELS

EXECUTIVE SUMMARY

Businesses face an almost overwhelming number of options for moving to “the cloud” to modernize IT capabilities and expand beyond traditional service models. Options include a combination of traditional on-premises datacenter capabilities and a wide range of cloud services deployment models. When evaluating the available options, IT should look beyond initial hardware and software expenses, as they are just a small piece of puzzle. A total cost of ownership (TCO) comparison over the lifetime of a project that includes **capital expenses** (on-premises hardware / software), **operating expenses** (services, support, and maintenance fees), and **indirect costs** (potential downtime and time-to-market delays) is a vital tool when comparing solutions. A transition to the cloud will change the TCO analysis model, as the capital expense and end-of-life requirements around hardware are removed, and business considerations must morph to include the flexibility and agility of a cloud deployment model.

This paper describes the TCO considerations for a self-managed on-premises solution compared to a managed hosting solution with dedicated infrastructure from Rackspace. In this example, a Rackspace dedicated hosting solution has the potential to save 37% TCO over a 3-year period compared to an on-premises solution for a retail / ecommerce use case. The benefits shown in the example are also applicable to other verticals and use cases. Moor Insights & Strategy (MI&S) recommends that IT organizations looking to expand their infrastructure beyond on-premises solutions managed by internal IT staff should add Rackspace to their short list of vendors for consideration.

THE IMPORTANCE OF IT TO DRIVE BUSINESS GROWTH

Modern IT organizations are undergoing a period of significant transition. As technology plays an increasingly important role in all aspects of business, IT is in the driver’s seat to help the business differentiate with new products, services, and routes-to-market. The datacenter infrastructure of the past is not well equipped to handle the new cloud-based applications and development models that are central to business success today.

More IT deployment solutions are available than ever before as IT organizations look to expand their capacity and improve their capabilities to keep up with business growth. The choices can be daunting for IT organizations who need to support a variety of users and applications. The optimal IT deployment model will be dependent on the needs of the specific workloads and business models that are unique to each organization. In an effort to gain efficiency, IT organizations are moving away from traditional on-premises and colocation strategies to a model that may combine on-premises / colocation, hosted, or cloud services solutions. Cloud services come in many flavors including private, hybrid, and public clouds with service offerings that include IT infrastructure hardware (IaaS), platform services (PaaS), and software / application services (SaaS).

NOT ALL SOLUTIONS ARE CREATED EQUAL

There are many considerations when looking at different IT deployment options. Table 1 compares some of the potential advantages and disadvantages of different approaches.

TABLE 1: IT DEPLOYMENT MODEL CONSIDERATIONS

	Potential Advantages	Potential Disadvantages
On-Premises	Control, security	Operational costs, long-term investment, requires internal IT expertise, lack of flexibility to respond quickly as demands change
Colocation	Lower long-term investment, flexibility to respond as demands change	IT costs of procuring / managing infrastructure
Dedicated Hosting	Performance, reliability, security (single tenancy), cost savings vs. On-Premises / Colo. managed services	Less flexibility than multi-tenant public cloud models to handle rapid changes in demand
Private Cloud (from a 3rd party vendor)	Enhanced security, control (compared to Public Cloud), managed services	Less flexibility than multi-tenant public cloud to handle rapid changes in demand
Public Cloud	Scalability, flexibility; ideal for unpredictable traffic, quick time to market, managed services	Lack of control, potential security issues, difficult to optimize performance
Hybrid Cloud	Best of all worlds, flexibility to choose the right offering for each workload, managed services	Managing multiple environments can increase complexity

Even within the same category, a decision to choose a specific vendor's solution must encompass more than infrastructure price alone. While some leading cloud services providers and hosting vendors attempt to compete on infrastructure price, a vendor's services and support offerings must be considered as a part of the total solution value.

A service provider's expertise and managed services offerings are increasingly important factors for comparing vendor solutions. To ensure an apples-to-apples

comparison across deployment models and vendor offerings, a comprehensive **total cost of ownership (TCO)** analysis—including both capital expenditures and ongoing operating costs—should be performed to help determine the right fit for each workload.

A full TCO analysis must include the following components:

- **Capital Expenses (CapEx):** New purchases of infrastructure and allocation of new datacenter buildouts
- **Operating Expenses (OpEx):** Hardware, software and datacenter support / maintenance costs, personnel, and related services
- **Indirect Business Costs:** Potential impact of downtime on productivity, revenue, company reputation, and other factors plus the time-to-market benefits of increased agility

THE BENEFIT OF MANAGED SERVICES

For organizations where IT is not a core business differentiator, it often makes more business sense to outsource some or all of the service and support required to run their IT resources more efficiently. Vendors who offer a full suite of managed services can serve as IT administrators and networking engineers, customize workloads for optimal performance, perform ongoing support, and manage or co-manage infrastructure and facilities to free people up to focus on the business. Using experts whose core business is IT can help improve uptime, ensure rapid deployment of applications, and optimize IT infrastructure for performance. Additionally, the service provider's engineers can manage not only the computing, storage, networking, and operating systems but also the complex tools and application stacks that run on top of that infrastructure.

The decision on which path to take will depend on the economics of hiring internal resources with the required expertise versus outsourcing to a vendor who specializes in managed IT services and support. The following TCO analysis provides one example of how to compare an on-premises solution with internal service and support resources versus a dedicated hosting solution that includes managed services expertise.

POTENTIAL TCO SAVINGS WITH DEDICATED HOSTING VS. A SELF-MANAGED ON-PREMISES SOLUTION

Dedicated hosting often provides a number of TCO benefits when compared to self-managed on-premises solutions. Some of these benefits include elimination of capital

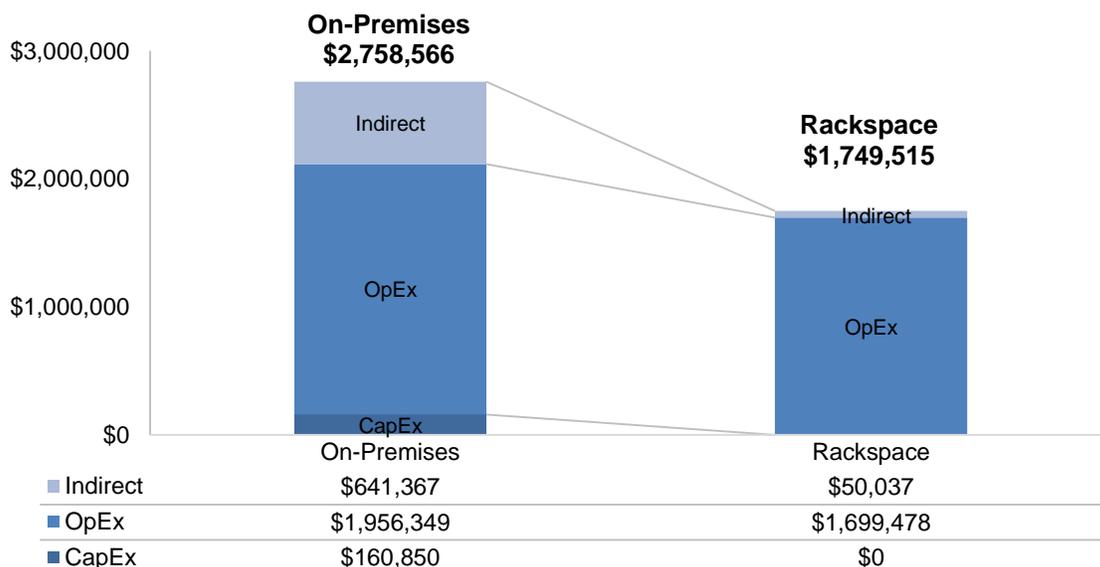
expenditures for on-premises infrastructure, services expertise from the hosting provider allowing for reallocation of IT staff, potential for lower unplanned downtime, faster time-to-market, and other factors.

MODEL OVERVIEW

To illustrate the TCO benefits of dedicated hosting, MI&S chose a customer profile example of a retail / ecommerce sales organization that aims to grow its ecommerce brand by offering the best possible online experience while using an IT cost structure that makes sense for the business. This example assumes \$10M annual revenue associated with this project so it could be applicable to a medium size company or one group within a large scale retail organization. In addition to the financial impact of revenue at stake, we assume the company would be exposed to brand reputation and customer loyalty challenges if the workload experiences downtime. Also, we assume the company’s primary reasons to consider a hosted solution are improved system availability and the ability to free up to IT staff to work on revenue-generating activities

This paper compares the major costs when evaluating an on-premises IT deployment versus a Rackspace dedicated hosting solution. Figure 1 provides a summary of the TCO results for an on-premises solution versus a Rackspace dedicated hosting solution for the example customer.

FIGURE 1: 3-YEAR TCO SUMMARY OF ON-PREMISES VS. RACKSPACE DEDICATED HOSTING SOLUTION



In this example, Rackspace’s dedicated managed hosting solution saves the customer 37% versus a self-managed on-premises approach. The following sections explore the associated capital expenses, operating expenses, and indirect costs.

CAPITAL EXPENSES

For the on-premises solution, capital expenses include the server, storage, and networking equipment required to support this project over a 3-year period. Additionally, this solution allocates a portion of the datacenter buildout required to support this new project. Appendix A describes the specific assumptions for the infrastructure configuration and datacenter buildout costs. Pricing is based on the estimated costs of equipment from global infrastructure vendors and is for illustrative purposes only.

The hosted solution chosen as the comparison point is a dedicated hosting solution from Rackspace that includes server, storage, and networking configurations comparable to the on-premises solution described in Appendix A. The Rackspace hosted solution requires no capital expenditures, as no equipment needs to be purchased. This helps minimize the long-term investment for a new project and upfront capital outlay required to get new infrastructure in place.

Table 2 provides the 3-year capital expenses line items for this example.

TABLE 2: TOTAL 3-YEAR CAPITAL EXPENSES

3-Year Capital Expenses	On-Premises	Rackspace
Server Infrastructure	\$73,703	\$0
Storage	\$2,000	\$0
Backup	\$100	\$0
Networking/Security	\$33,207	\$0
DC Infrastructure	\$51,840	\$0
Total Capital Expenses: 3 Years	\$160,850	\$0

OPERATING EXPENSES

Operating expenses include activities and expenses required to install, setup, and keep the application running over this project’s 3-year lifecycle. For the self-managed on-premises scenario, non-personnel expenses include ongoing maintenance / support costs, software licensing (assuming software is procured in an “as a service” model), OS / networking / security subscription maintenance, ongoing network bandwidth costs, and datacenter power / cooling / labor costs allocated to this project. Appendix B provides the specific line items included for non-personnel related costs specific to this TCO example.

To solve the specific needs of the example customer, the Rackspace solution assumes their “Intensive” level of Rackspace Fanatical support with database administration architectural services and critical application services. These support services from Rackspace are designed to ensure the example company’s ecommerce site is optimally architected and run to provide the best customer service experience possible.

People costs are the largest operational expense. The personnel costs calculated in this model include salaries and benefits of IT staff along with ongoing training costs. Additionally, costs are incurred for the recruitment / onboarding of new IT staff in the case of employee turnover. Appendix C describes the personnel cost assumptions and lists average baseline salaries for both the on-premises and Rackspace hosted solution.

One of the primary benefits of hosted services versus an on-premises solution is the lower internal personnel staff required for the project. Leveraging managed services from a hosting provider **allows IT organizations to free up their staff to work on more strategic, revenue-generating projects** instead of focusing on operating infrastructure. This analysis includes varying rates of IT staff re-allocation when deploying Rackspace solution versus on-premises depending on the specific function.

The TCO model calculates how many full-time employees (FTEs) are needed to oversee the servers, network, databases, storage, and other elements of a project. A person who only spends part of his or her time on the project is estimated as a fraction of an FTE. For instance, if an IT staffer spends one quarter of his or her time on this retail / ecommerce application, then the TCO analysis counts that as 0.25 FTEs. Two scenarios were modeled for on-premises FTEs which depict both a “Slim” operating model (minimal IT support staffing) and an “Optimal” operating model (estimated FTEs required to provide as close to an equivalent Rackspace Fanatical support model).

Table 3 compares each model; for conservative purposes, this example TCO analysis uses the “Slim” IT staffing model.

Six Flags Chooses Rackspace for High Availability

Six Flags, the world’s largest amusement park corporation, chose Rackspace dedicated server solutions to meet the high availability needs of their corporate website, sixflags.com.

As one of their primary commerce engines for ticket and season pass sales, sixflags.com must be highly available to ensure no online ticket sale revenue is lost due to unplanned downtime.

Rackspace developed a solution for Six Flags that is highly redundant to maximize availability and is designed to handle traffic spikes during the peak summer season.

For more information about Six Flag’s experience with Rackspace solutions, visit <http://stories.rackspace.com/six-flags>.

TABLE 3: INTERNAL IT REQUIREMENTS (FTEs)

Support Level		Internal FTEs Required	
		On-Premises	Rackspace
“Slim”	Minimal IT support staffing. Lower operating costs but higher risks of downtime and turnover.	3.00	0.77
“Optimal”	Beefed up IT staff to provide as close to an equivalent Rackspace FANATICAL support model. Very costly to recruit, hire, & maintain.	8.55	2.20

Table 4 compares the self-managed and the Rackspace managed personnel cost breakdown based on the above assumptions. Both sets of figures include a “Slim” internal IT staffing assumption.

TABLE 4: PERSONNEL COSTS

3-Year Personnel Costs	On-Premises	Rackspace
FTEs (“Slim”)	3.00	0.77
IT Labor (Salary + Burden Rate)	\$1,158,948	\$315,195
IT Training Costs	\$41,400	\$10,688
IT Turnover Costs (Recruitment + Onboarding)	\$10,125	\$2,607
Total Personnel Costs: 3 Years	\$1,210,473	\$328,490

Table 5 shows the total operating expenses for on-premises and Rackspace.

TABLE 5: TOTAL 3-YEAR OPERATING EXPENSES

3-Year Operating Expenses	On-Premises	Rackspace
Server Maintenance	\$ 22,889	
OS/DB Licensing + Support	\$37,125	
Storage Support	\$900	
Networking / Security License	\$339,053	\$1,370,988
Networking / Security Support	\$65,801	
Bandwidth	\$34,387	
DC Space / Power / Cooling / DC Labor	\$245,722	
Personnel	\$1,210,473	\$328,490
Total Operating Expenses: 3 Years	\$1,956,349	\$1,699,478

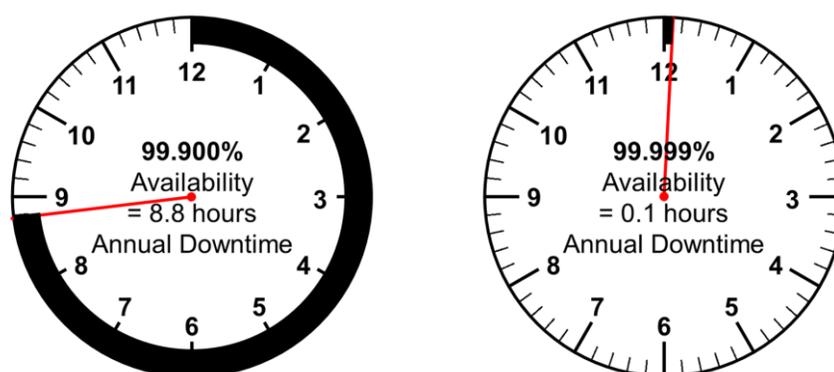
INDIRECT COSTS

Capital expenses and operating expenses are not the only things to consider when evaluating TCO. A number of indirect costs affect the business when IT experiences downtime or takes additional time to bring the infrastructure up to support a new revenue opportunity. While these costs are difficult to measure and vary widely by project and company, we have included a set of assumptions here for illustrative purposes to demonstrate the potential impact.

Downtime

This model assumes 99.900% uptime for the on-premises solution (8.8 hours annual unplanned downtime). With Rackspace, system availability service levels are guaranteed to 99.999% (0.1 hours annual unplanned downtime). Higher availability can decrease annual unplanned downtime significantly. Figure 2 illustrates the potential impact on hours of operation for the business.

FIGURE 2: AVAILABILITY & DOWNTIME



Unplanned downtime has the potential to impact a number of areas, including labor productivity, revenue, and reputation / customer loyalty. In this example of a retail / ecommerce organization focused on a positive online experience, the ripple effects can be significant if the web infrastructure experiences outages or other technical difficulties.

To model **lost labor productivity** in this example, we estimated 150 employees could be impacted by application downtime either directly as IT staff or indirectly as marketing, sales, support, or administrative staff involved in the project. Based on the nature of this application, this customer would not have a high risk for significant impact to labor productivity from unplanned downtime; to model this effectively, the theoretical impact is shown with a weighting factor of 5%. Table 7 demonstrates the calculation.

TABLE 6: PRODUCTIVITY IMPACT DUE TO DOWNTIME

	On-Premises	Rackspace
Employees affected by outage	150	150
Average impact to employee productivity	5%	5%
Average employee cost per hour	\$62	\$62
Annual hours of unplanned downtime	8.8	0.1
Estimated Annual Loss Due to Labor Productivity	\$4,067	\$41
Total Labor Productivity Lost: 3 Years	\$12,201	\$123

For a retail / ecommerce organization, the potential **revenue impact** can be significant if the website experiences downtime or technical challenges. In this case, revenue lost may come in the form of direct loss, compensatory payments, lost future revenue, or billing losses. To illustrate the potential impact, we assumed \$10M of potential annual revenue tied to the project to show the theoretical impact with a weighting factor of 75%. Table 8 demonstrates this calculation.

TABLE 7: REVENUE IMPACT DUE TO DOWNTIME

	On-Premises	Rackspace
Gross Annual Revenue	\$10,000,000	\$10,000,000
Total Yearly Business Hours	8,760	8,760
Hourly Revenue	\$1,142	\$1,142
Percentage Impact (%)	75%	75%
Annual hours of unplanned downtime	8.8	0.1
Estimated Annual Revenue Lost	\$ 7,500	\$ 75
Total Revenue Lost: 3 Years	\$ 22,500	\$ 225

Retail / ecommerce organizations also have the potential for a long-term impact to company **reputation and loyalty** if downtime results in a poor user experience or negative publicity. This could have a direct result in loyalty issues from customers, business partners, suppliers, and investors. Table 9 illustrates the impact on brand reputation and loyalty for this scenario, using the same approach as the revenue impact calculation as both have similar but separate impacts on company revenue.

TABLE 8: REPUTATION & LOYALTY IMPACT DUE TO DOWNTIME

	On-Premises	Rackspace
Gross Annual Revenue	\$10,000,000	\$10,000,000
Total Yearly Business Hours	8,760	8,760
Hourly Revenue	\$1,142	\$1,142
Customer Loyalty/Reputation Impact (%)	75%	75%
Annual hours of unplanned downtime	8.8	0.1
Estimated Annual Loss Due to Damaged Reputation & Loyalty	\$7,500	\$75
Total Damage to Reputation & Loyalty: 3 Years	\$ 22,500	\$225

In addition to these factors, a number of **other business factors** could be impacted in the case of downtime. These include direct financial impacts (revenue recognition, cash flow, payment guarantees, credit rating, stock price), regulatory and legal obligations, the need for temporary employees, equipment rental, overtime costs, extra shipping costs, travel expenses, and compliance requirements (financial penalties, legal liabilities). The combination of these factors could be significant; this scenario models the potential impact at \$31,250 per hour of downtime.

TABLE 9: ADDITIONAL BUSINESS IMPACTS DUE TO DOWNTIME

	On-Premises	Rackspace
Average business costs per hour of downtime (\$)	\$31,250	\$31,250
Annual hours of unplanned downtime	8.8	0.1
Estimated Annual Business Costs Due to Downtime	\$273,750	\$2,737
Total Additional Business Costs: 3 Years	\$821,250	\$8,212

Time-to-Market

One of hosting's benefits is improving **time-to-market** with additional infrastructure for business growth or traffic spikes. This example conservatively models the revenue implications of 5% annual capacity growth against the time to deploy additional capacity. Table 11 calculates the potential revenue impact.

TABLE 10: DEPLOYMENT DELAYS DUE TO EXPANSION

	On-Premises	Rackspace
Average Time (Days) to procure additional infrastructure	45 Days	0 Days
Average Time (Days) to build, and deploy	25 Days	20 Days
Revenue Generated Per Hour (\$10M run rate)	\$1,142	\$1,142
Time to procure hardware for additional capacity (hrs)	1,080	0
Total time to build and deploy infrastructure (hrs)	600	480
Estimated increase in capacity requirements (%)	5%	5%
Estimated annual revenue lost due to deployment delays	\$95,890	\$ 27,397
Total Deployment Delay Loss: 3 Years	\$287,671	\$ 82,192

Indirect Costs Summary

Table 12 summarizes the example's indirect costs. The model calculates all impacts from downtime and time-to-market deployment delays then applies a 55% realization factor to minimize the impact of a "perfect storm" Realistically not everything would happen at once during downtime or delays, so not everything is impacted at the maximum rate.

Staffing expertise and resources are pivotal in mitigating IT specific business risks. This TCO example uses the "Slim" staffing option which has lower operating expenses than the "Optimal" staffing option but potentially higher indirect costs. The realization factor would be lower using the "Optimal" staffing option which has higher operating expenses than the "Slim" staffing option but potentially lower indirect costs.

TABLE 11: TOTAL 3-YEAR INDIRECT COSTS

3-Year Indirect Costs	On-Premises	Rackspace
Labor Productivity	\$12,201	\$123
Revenue Lost	\$22,500	\$225
Reputation & Loyalty	\$22,500	\$225
Additional Business Costs	\$821,250	\$8,212
Deployment Delay	\$287,671	\$82,192
Total Potential Indirect Business Costs	\$1,166,122	\$90,977
Indirect Business Cost Realization Factor (%)	55%	55%
Total Realized Indirect Costs: 3 Years	\$641,367	\$50,037

TCO SUMMARY

The TCO analysis for this retail / ecommerce use case takes into account capital expenses, operating expenses, and indirect costs associated with the project. This example demonstrates a total savings of 37% with a Rackspace dedicated hosting solution versus a self-managed on-premises deployment approach.

TABLE 12: 3-YEAR TCO SUMMARY OF ON-PREMISES VS. RACKSPACE DEDICATED HOSTING SOLUTION

	On-Premises	Rackspace	Savings
Capital Expenses	\$160,850	\$0	
Operating Expenses	\$1,956,349	\$1,699,478	
Indirect Costs	\$641,367	\$50,037	
Total Cost of Ownership: 3 Years	\$2,758,566	\$1,749,515	37%

USING IT RESOURCES TO MAXIMIZE MARGINS

A key related benefit of using a hosted solution versus self-managed on-premises solution is the potential to reassign IT staff to revenue-generating or margin-creating activities. Examples of the benefits of reallocation are projects designed to:

- Improve availability for another workload / application
- Improve employee efficiency and effectiveness
- Help the business expand into new market segments
- Improve the customer experience
- Develop new or enhanced products and services
- Focus on other revenue-generating activities

It is important to consider optimal allocation of IT resources when comparing infrastructure solution approaches. Modeling the benefits to revenue and margins will vary widely by customer and specific project.

CALL TO ACTION

IT organizations looking to help drive competitive differentiation for the business have a range of choices to expand their capabilities. It is important to comprehend the full TCO when comparing these choices. A **total** cost comparison goes beyond standalone infrastructure costs; it encompasses the cost of service and support over a solution's useful life. This paper compared total costs—capital expenses, operating expenses, and indirect costs—for an on-premises and a managed hosting solution. Although standalone hardware infrastructure may cost less using a self-managed on-premises approach, this paper's TCO example illustrates the potential for a 37% total savings over 3 years for a medium to large retail / ecommerce organization when using a Rackspace hosted solution versus self-managed on-premises infrastructure.

In addition to the dedicated hosting solution featured in this TCO analysis, Rackspace offers private, public, and hybrid cloud solutions using their own infrastructure. Also, Rackspace more recently added their support services on top of other leading cloud infrastructure from Microsoft Azure and Amazon Web Services. IT organizations who see potential value in expanding their infrastructure beyond on-premises solutions managed by internal IT staff should add Rackspace to their short list of vendors for consideration.

APPENDIXES

APPENDIX A: HARDWARE & SOFTWARE CONFIGURATION FOR THE ON-PREMISES SCENARIO

- Server Equipment:
 - 9 x 2U servers with 1 x eight-core processors and 64GB of RAM – running Red Hat Enterprise Linux 6
 - 3 x 2U servers with 2 x eight-core processors and 128GB of RAM - running Red Hat Enterprise Linux 6
 - Assumed 10% hot spare capacity for 3 Years
 - 1 Server Rack including a rack chassis with dual 280V per rack
- Storage Capacity:
 - 0.5 TB useable SAN capacity
 - 5% storage backup for 3 years
- Networking Equipment:
 - 2 x Cisco ASA 5500-X Series x6 port Firewall – (HA Pair)
 - 1 F5 LTM 2000s- HA Load Balancer
 - 1 F5 LTM 2000s Load Balancer
 - 1 Intrusion Detection Appliance (IDS)
 - 1 Imperva SecureSphere Web Application Firewall (WAF)
- Datacenter Build out allocation for this particular application:
 - \$4M cost for 1 MW datacenter at 75% datacenter power utilization
 - Assumes 21,600 total watts required for this solution

APPENDIX B: OPERATING EXPENSES (NON-PERSONNEL) FOR THE ON-PREMISES SCENARIO

- On average support/maintenance support cost of 15% for 3 years for server, storage, networking hardware, OS licensing subscription maintenance and networking/security subscription maintenance.
- RHEL License and Support Costs
- Networking and Security Licensing Costs
- Bandwidth for 12 Compute nodes at 800 GBs per month for 3 years
- Datacenter Power/Cooling/Labor rates based on a cost per watt of method of allocation based on average US datacenter rates

APPENDIX C: PERSONNEL ASSUMPTIONS FOR ON-PREMISES & RACKSPACE SCENARIOS

- **Labor Rates** vary by function and were developed using a number of sources to determine typical US IT salaries in a suburban location.

Duties & Services	Annual Base Salary
Hardware Management	\$85,500
OS Support / Server Application Mgmt	\$90,000
Storage Management	\$81,000
Database Mgmt & Admin	\$90,000
Network & Security Management	\$90,000
Application Development	\$99,000
Administrative & Other	\$108,000

- **Labor Overhead:** 40% burden rate = US Department of Labor: Bureau of Labor Statistics [Employment Cost Trends](#) average cost of benefits divided average cost of wages & salaries and rounded down.
- **Training Costs:** \$5,000 annual training per IT employee which equates to an average of 60 hours per year per employee. No training assumed for Administrative functions.
- **Turnover:** 5% annual turnover for all IT staff. (This assumption is deliberately low compared to average annual turnover rates.)
- **Recruitment / Onboarding Costs for New Staff Member:** 25% of average IT base salary. (This assumption is deliberately low compared to average recruitment / onboarding costs.)

IMPORTANT INFORMATION ABOUT THIS PAPER

AUTHOR

Gina Longoria, Senior Analyst at [Moor Insights & Strategy](#)

REVIEW / PUBLISH

Patrick Moorhead, President & Principal Analyst at [Moor Insights & Strategy](#)

EDITOR / DESIGN

Scott McCutcheon, Director of Research at [Moor Insights & Strategy](#)

CITATIONS

This paper can be cited by accredited press and analysts but must be cited in-context, displaying author's name, author's title, and "Moor Insights & Strategy". Non-press and non-analysts must receive prior written permission by Moor Insights & Strategy for any citations.

LICENSING

This document, including any supporting materials, is owned by Moor Insights & Strategy. This publication may not be reproduced, distributed, or shared in any form without Moor Insights & Strategy's prior written permission.

DISCLOSURES

Rackspace is a research client of Moor Insights & Strategy, and this paper was commissioned by Rackspace. Moor Insights & Strategy provides research, analysis, advising, and consulting to many high-tech companies mentioned in this paper. No employees at the firm hold any equity positions with any companies cited in this document.

DISCLAIMER

The information presented in this document is for informational purposes only and may contain technical inaccuracies, omissions, and typographical errors. Moor Insights & Strategy disclaims all warranties as to the accuracy, completeness, or adequacy of such information and shall have no liability for errors, omissions, or inadequacies in such information. This document consists of the opinions of Moor Insights & Strategy and should not be construed as statements of fact. The opinions expressed herein are subject to change without notice.

Moor Insights & Strategy provides forecasts and forward-looking statements as directional indicators and not as precise predictions of future events. While our forecasts and forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could cause actual results to differ materially. You are cautioned not to place undue reliance on these forecasts and forward-looking statements, which reflect our opinions only as of the date of publication for this document. Please keep in mind that we are not obligating ourselves to revise or publicly release the results of any revision to these forecasts and forward-looking statements in light of new information or future events.

©2016 Moor Insights & Strategy. Company and product names are used for informational purposes only and may be trademarks of their respective owners.