

## REAL-TIME HYBRID AND MULTI-CLOUD DESIGN AND MODELING

#### **ENABLING THROUGH AUTOMATION AND INTEGRATION**

Today many different systems are used in very disconnected ways to gather data, design solutions, compare scenarios, analyze economics, build quotes, choose strategies, and deploy multi-cloud and hybrid solutions. Burstorm enables real-time collaboration by connecting the disconnected people, automating manual processes and integrating disconnected systems.

Burstorm is used to connect, automate, enable, and accelerate several different types of clients including many service providers, large financial, federal and government, and Military. Clients of mention include: Telmex, Hostway, Fidelity, Engility, CIDESI, NATO/NCOIC.

### **COMPLEXITY RISING EXPONENTIALLY**

Cloud is complex. A basic server requires solution designers to navigate over 6.2 Billion potential combinations. The potential combinations escalate into the Trillions when designs include multi-cloud, hybrid cloud as any additional internal and external options. Complexity rises again when considering countless more combinations possible with additional locations, pricing options, consumption rules, deployment rules, economic models, additional components, licensing, management, monitoring and so on. Burstorm is the only purpose-built platform for the IT industry that can quickly and accurately navigate the complexity of hybrid and multi-cloud solutions with the real-time alignment of strategy, economics, technology, and risk. Burstorm is the only solution for the rising complexity and rapid, continual change encumbering every enterprise, service provider, consultant, integrator, and channel partner today.

### **TODAY IS DISCONNECTED, MANUAL AND SLOW**

Enterprises have roughly 10-15 different suppliers for different solution components and services. It typically takes 2-3x that in point-solution tools to manage environments. Interestingly, everyone follows the same process. They just look at it from different points of view. Things are measured, somewhat normalized, almost compared and wishfully optimized. Large, expensive decisions are made with more than 70% of those solutions altered or redesigned after initial implementation starts.

Integration / Ecosystem	Bur	Integration / Ecosystem					
Measure	Visualize Norma	lize / Compare / Desigr	n / Optimize	Visualize	Acquire / D	eploy	Billing Data
Data         Analytics/Metrics           MonitoringTools         Spreadsheets           ManagementTools         Email           Billing/Cost         Reports           CMDB         Billing Files           CRM         Calculators           Etc.         Websites           Manual Tools         Homegrown	Planning Spreadsheets Email Sharepoint RFI / RFP Calculators Websites People Workload Planners	Optimization Spreadsheets Email Sharepoint RFC Calculators Websites People Billing Optimizers	Quotes / Compare Spreadsheets Email Sharepoint RFQ Calculators Websites People Homegrown		<u>Contract</u> Word, PDF Email Sharepoint Cont Mgmt Sys CPQ	<u>Deploy</u> Manual UI Chef Puppet API	_

### **STOP-AND-GO PREVENTS ACCELERATION**

Nearly all tools used today are technical with no knowledge of other providers, market options, market trends or ability to visualize/model future state scenarios across multiple locations and solution providers. Nearly all tools have a single lens into a much larger more complex problem. CMDB gathers current state data. Billing optimizers cannot optimize poor decisions. CPQ systems perpetuate an already slow stop-and-go process. Orchestration and management tools are not used to design. Automated design with economics is the only way to accelerate and improve accuracy



Nearly all stop and go is eliminated by using real-time collaboration, automated design and designing with economics, from the very beginning. The remaining delay continues to be when clients turn to validate internally. Some level of delay will always remain but is significantly shortened due to Burstorm's automated modeling and ability to design with economics from the beginning.

#### **Updated Process with Burstorm**

(Effort and response time reduced 90%+)



### **CONTINUOUS NAVIGATION, NORMALIZED DATA**

Real-time scenario-based solution design is powered by Burstorm's in-house developed design engines and ground up designed common specification language. Successful solutions must align technical requirements, economic impact, strategy, and risk profile simultaneously.

Burstorm's Common Specification Language greatly reduces the complexity of product management and solution design. As an example, single servers can have Billions of combinations. Burstorm reduces that to one single line that needs to be managed and updated with changes instantly available for designs.

Virtual Compute - USE								
Description								
product description								
	Prod	luct Le	ocation(s)					
×Richmond, VA ×Atlanta, GA								
New Location								
Product Specs			Discounts					(
OS Versions			Term (months) Price Disco				count (percent)	
CentOS	Exercise Contraction		0			0		
Ghz	Seek Tech		Term (months)	NRC Discount (percent)				
processor speed		٠	Pricing					(
Is VM?	Is Shared?		Currency Price Units					
Yes	Yes	٣	S (USD)			• Hou	urly	,
ID-C					Base Co	onfiguratio	on	
PV6			Cores		RAM (GB)		Storage (GB)	
1			1		1		100	
Add Associated Products		_	Price		NRC			
Compliance		٥	0.0719178	0.071917808219				
Advan	ced	0						
			Configuration Formulas Cares Ladder M Price/Unit Unit Size Min Max				ulas Ladder Mod	e 🗆
			0	1		0	2	٦,
			Price/Unit	Unit S	ize	Min	Max	0
			0.006940	1		3		

### **BURSTORM DRAG/DROP INTERFACE**

Drag and drop design enable connected real-time insight that can change the course of a design as it is built rather than discovering design flaws after commitments are made, strategies have been chosen, and implementations start to unravel. Burstorm is the only platform available today that can visualize current state, future state, and interoperability, anywhere in the world, at any time.



### **PRIMARY INTERACTION METHODS**

Service providers and suppliers typically have hundreds or thousands of products across multiple locations with multiple pricing structures. The complexity of millions of potential combinations and permutations is hard to manage, slow and prone to error.

Burstorm enables real-time modeling and visualization of the current state, future state, interoperability, economics, performance, and connects the disconnected systems from end to end. Burstorm gathers all product and service attributes, normalizes the data, then discriminately maps, matches and compares objectives and constraints in real-time. Solution development and optimization are performed in minutes versus hours, days and weeks using today's processes and tools.

Key roles enabled and automated include product managers, architects, solution engineers, sales, sales ops, consultants, integrators, channel partners, finance, purchasing, partners and thirdparty vendors.

#### Method 1 – API Integration

Clients usually have existing tools, processes and data structures. Different methods, or different combinations of methods, are used to simplify ingesting and normalizing the data.

Burstorm continues to automate and enable by actively integrating to service providers, discovery, data aggregation and operations tools, management and orchestration engines, CRM, and contract management systems.

#### Method 2 – Export / Import

Data from multiple tools and locations can also be gathered via existing tool exports. File types may include CSV, Excel, XML, YAML, etc. Examples include inventory and billing files. Burstorm quickly and accurately imports data directly from the exported file utilizing in-house built "transformers" and "importers" as needed.

#### Method 3 – Manual Entry

Manual entry is used for small and or custom operations where data is dispersed and hard to gather. Data can be quickly entered using copypaste from external spreadsheets to internal spreadsheet views, dragdrop and/or fill-in methods. Examples may include non-standard billing files for generator refueling contracts and maintenance. "THE SECRET OF CHANGE IS TO FOCUS ALL OF YOUR ENERGY, NOT ON FIGHTING THE OLD, BUT ON BUILDING THE NEW."

SOCRATES

### **APPENDIX A**

#### **EXAMPLE METHODOLOGY FOR EXPORT/IMPORT**

API integration is our preferred method for ongoing and automated interactions between systems and tools. In our experience, the Export / Import method can provide a very quick for quick progress and quick wins with the least effort and the least risk. This approach avoids any heavy lifting for integration up front. It also allows everyone involved to learn and adapt as the process unfolds.

The diagram below shows a typical process that starts with data exports from current tools, documents, etc. Burstorm will review the data and prepare it for import. During this review, Burstorm will meet with product managers, architects, SEs, etc. to make sure consumption rules, deployment rules, pricing, etc. are clearly understood so product and solution sets can be built accurately. Example, certain services may not work with others and therefore should not appear in the same solution as they cannot be deployed together.

User training starts following the data imports. Burstorm will begin testing the imported data validating against the original data provided. Burstorm will then move to collaborative testing with Product Managers. Burstorm training begins following data import. After Product Managers approve configurations, testing moves to architects and SEs for solution building and design tests. Sales, Sales Ops, Finance, etc. if in the user base will be trained and utilized to test their relevant functions.



**EXPORT / IMPORT STYLE IMPLEMENTATION** 

#### MAINTAINING THE DATA

Data has been exported, imported, validated, tested and now put into production. How is it kept up to date? There are multiple methods; again the approach is probably a combination of methods.

#### Method 1 – API (manual trigger or automated job)

Data can be pushed or pulled via API to avoid data becoming stale and inaccurate. If the client has not pushed, Burstorm will initiate a pull to refresh the data. This bi-directional interaction allows data to update even if it has not been promptly communicated. Burstorm's API separates the initiation, the payload and the transport. As an example. a transfer can be triggered by the Burstorm platform or the 3rd party app. The payload can be a JSON, CSV or XLS file and the transport could be a manual upload or a secure encrypted network channel.

#### Method 2 – Export / Import

If catalogs and services are being kept within another tool that is continuously updated, the data can be exported and imported into Burstorm. Every tool has an export file type. Burstorm may be able to use existing formats or can build custom importers to enable accurate high-speed changes, adds, moves and deletes.

#### Method 3 – Product Managers can update

Our role is to enable and automate. However, some product managers want to make any changes themselves. We encourage Product Managers to get in and do all they can whenever possible. Product Managers have complete control of their data and can make changes as needed.

#### Method 4 – Send any changes to Burstorm

Our role is to enable and automate. If there are changes to a product or service, they can certainly be passed to us for an update. In many cases, the product managers are busy or would rather have Burstorm handle it. We helped set up the environment and can make the needed changes quickly.

### **USE CASE #1**

Multinational Telecommunications and IT Services company needed to digitize their product management, design, and quote process to be successful in an increasingly competitive market

A market leader in network, communications, data center, cloud computing, security and enterprise solutions were facing increasing competition from global cloud vendors and emerging network providers. The customer launched an enterprise initiative to digitize their product management, design, and quote process while at the same time enabling their team to benchmark their services against competitive offerings to better position and market their solutions. After evaluating multiple vendors, the customer selected Burstorm to be their core platform.

After a 120 day implementation, the project successfully integrated 95% of the customer's network, communication solutions, data center services, cloud computing, security and IT related services into Burstorm's online catalog and platform. The customer also activated private benchmarking functionality to be able to compare the price and performance of their solutions with other cloud service providers such as AWS, Microsoft Azure, Google Compute, IBM SoftLayer and Rackspace. Private benchmarking provides the company with real-time analysis and competitive insight to continuously improve their cloud computing offerings.

- Because Product Managers can configure and maintain their business rules and pricing configuration in the Burstorm platform, pricing change rollouts reduced over 99%, from 20-25 hours to 10 minutes
- Solution Engineers (SEs) can consume and design solution scenarios accurately and in real-time while collaborating with other engineering groups, sales, and product managers through the application workspace. Sales cycles reduced by 90-95% from several weeks to 2.5 days total.
- Designs and proposals that took weeks and even months can now be completed within minutes and days.
- Leveraging Burstorm's real-time design capability, SEs can proactively consider all available product lines rather than just responding to the customer request resulting in more accurate designs while increasing new contract value by 5% in the first quarter of use.
- Customer satisfaction has increased as pre-sales teams are spending more time strategizing with customers and less time buried in the process.

### **USE CASE #2**

# Global Service Provider offering business critical and recovery services with the objective to enable their Channel Partners

Enhancing the partner experience was a top strategic initiative for this global service provider offering critical production and recovery services. Their objective was to enable their channel architects to "consume" the wide range of the companies' compute, storage, network and IT related services in real time. The design and quoting process took weeks and even months before a quote was delivered to the end customer.

With the Burstorm platform, the company streamlined processes while enabling their channel partners to be more effective and responsive to their customers and engagements. The company had better visibility across their multitude of services in the market. They dramatically reduced quote response time to channel partners and customers. The reduction in response tie increased Architect Engineers/Solution Engineers productivity. Architects and SEs also spent less time on unqualified opportunities and increasing their lead conversions to increased revenue from their channel partners

### **USE CASE #3**

#### Cloud Service Provider (CSP) with an opportunity for an AWS deal

This CSPs consulting organization was challenged to help the end-customer lower their out-of-control AWS costs by identifying optimization opportunities and considering another cloud supplier since the CSP offers multi-cloud solutions. The CSP architects admittedly would have spent at least a month trying to work through the many spreadsheets, Visio diagrams, PowerPoint presentations, online calculators and competitive analysis required to offer any valuable or actionable insight.

The CSP used the Burstorm platform to directly import the client's AWS billing files to create the architecture and begin financial analysis. Within 4 hours the CSP delivered three optimized solutions based on real-time supplier price and performance data all normalized for a true and accurate comparison.

### **USE CASE #4**

Top 3 Worldwide Consulting and Systems Integrator needed to make quick and insightful assessments to determine infrastructure project opportunities

IT consulting firm with a growing infrastructure management practice who needed to provide customers with quick insights to propose cloud migration projects. By utilizing the Burstorm platform, the consulting firms' architects could create a customer dashboard with an As-Is infrastructure model; including, their network, datacenter and in-house internal lease and licensing contracts.

The consultants copied the As-Is model to create three different scenarios; each scenario had more than 12 potential cloud vendors matching the objectives and constraints of their client. Within a week, they presented the customer with a solid ROI case including three potential strategies, and successfully sold an infrastructure transformation project.

### **USE CASE #5**

Large Financial Services organization needed to benchmark internal vs public cloud services to support their multi-cloud deployment strategy

The Burstorm platform enabled this top 5 large Financial Services Company to benchmark internal Private Cloud offerings running VMware, KVM, and Xen OpenStack. The benchmarks compared price and performance metrics against comparable solutions from internal capability, and external capabilities on AWS, Microsoft Azure, IBM SoftLayer, Google Compute Engine and Rackspace.

The customer's internal IT team can capture cost models to create internal product sets that are normalized and then compared to the market. As a direct result, the customer can continuously evaluate and model their IT infrastructure with real-time data and insight. Leveraging Burstorm's private benchmarking and design capabilities lets this customer evaluate multiple design scenarios and determine the optimal path and optimal execution venues based on price and performance for each situation and workload.