

# Dell Services Integration Made Easy With Dell Boomi

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*Dell Services uses Boomi to decrease complexity and speed integration of customer asset and incident management systems.*

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Dell Services faces a unique challenge. Customer service desk and asset management systems come in a dizzying array of products, types, and completeness. How does a services company deal with this complexity while keeping costs low?

Asset information and service desk integrations are two highly sought after modules for Dell Services customers. The asset information stored at the customer site is integral to data completeness in a modern Configuration Management Database (CMDB). Customer asset data is often held in complex systems, such as systems management products, or contained in spreadsheets and proprietary databases. Extracting information from these systems is typically a manual process. Once extracted, the data is normally sent to Dell Services as a flat file, often without a standard format across customers.

Integration automation (ETL – Extract, Transform, Load) is the solution to common problems such as these, although existing solutions have unique obstacles of their own. Typical automation engines require a high level of access to customer datacenters...a process made more difficult with modern network firewalls. Customer security teams are often reluctant to grant fully remote Dell Services systems access to critical infrastructures, and implementing 'customer local' solutions increase the cost of the service that Dell provides. Implementing complete automation solutions is also a considerable undertaking because they require a unique skillset and often weeks of training. These highly-complex automation suites, while immensely powerful, are overkill for the simple tasks of data extraction and manipulation.

Integration engines typically come in two flavors – built-in to CMDB/Service Desk, and 3<sup>rd</sup> party add-ons. Built-in integration engines are prone to affect performance of the service desk while the integration is being performed. For Dell, this performance hit affected service desk personnel, employees using the self-help and service request interfaces, and customers who subscribed to the service desk offering. Third party add-on integration engines are often expensive, and have their own unique skillsets that have to be developed. Both flavors of integration engines suffer from another flaw – they are not cloud based, which increases the amount of infrastructure work needed for onboarding customers.

Dell Boomi simplifies tasks required by scenarios such as these. Boomi is a cloud based automation engine with integrations into a wide array of asset and systems management tools. The Boomi solution offers many options for datacenter access, and requires very little access in order to perform these automation tasks.

Boomi AtomSphere allows you to connect any combination of Cloud, SaaS, or On-Premise applications with little or no appliances, no software, and no coding. The Visual Integration Technology designer allows for integration processes to be created quickly and easily using familiar point-and-click/drag and drop techniques. The Boomi



Atom, a 'customer local' runtime engine, alleviates the need for complex firewall changes and alleviates security concerns. Processes and Atoms can be managed across customers, enabling Dell Services to monitor the health and activity across contracts.

Boomi simplifies integration, improves customer asset data management, and ultimately reduces the cost of asset management for Dell and its customers.

Customers that use a systems management solution, such as Dell Kace or Microsoft Systems Center Configuration Manager (ConfigMgr), will find that extracting asset data and integrating with Dell Services CMDB is easy, automated, and fast. Combining systems management solutions such as these with Boomi ensures that the Dell Services CMDB is never out of date with customer data.

The Dell Boomi solution also makes integration of business data simple and efficient. Customers environments change, and those changes need to be reflected within the Dell Services CMDB quickly and automatically. Important changes, such as new facilities or new customer contact information, can be uploaded to Dell via Boomi on an as-needed or reoccurring basis.

### **Changing customer environments – the Boomi Solution**

A common problem faced by Dell Services is the ever-changing customer environments, especially for the Mid-Level and Advanced Monitoring teams. They are often only informed of new servers or services once an incident has occurred on the device, well after monitoring should have been implemented.

Using Boomi (along with some industry standard tools) changes to the customer environment can be dealt with proactively. Take the following example:

- 1) Customer installed a new server class system in their datacenter.
- 2) BMC ADDM discovers the system through automated subnet scans.
- 3) Dell Boomi queries ADDM on a scheduled basis. Boomi is querying for newly added servers.
- 4) Dell Boomi sends the new data to the Dell Services Remedy and CMDB instances.
- 5) Dell Boomi sends an email to the Dell Customer Executive and the customer point of contact, informing them a new server has been found.
- 6) Dell Boomi initiates a process that starts the installation of a Systems Monitoring agent, such as Microsoft System Center Operations Manager (OpsMgr).

From the above example we can see that the addition of the server to the appropriate Dell Services asset repository was completely automated, and filled the gap that manual processes leave behind today. The lag-time between installation of a server



and coverage by a monitoring solution has also been greatly reduced.

The Boomi Atom eliminates the complex firewall rule changes normally associated with remote automation infrastructures. Utilizing the lightweight Atom, Boomi is able to perform the bulk of the information in the customer's datacenter, only moving the data to the Dell CMDB after manipulation. Access to critical asset management systems is done locally, alleviating common security concerns. The Atom is extremely lightweight, often residing in a small virtual machine or co-hosted with other services.

Out of the box, Boomi does not have a BMC Remedy connector, but it exposes a Connector SDK which allows coding custom connectors in Java. Therefore a custom Remedy connector was created by Dell Services, and is completely reusable across multiple customer accounts. The connector contains basic functionality, such as query, update, add, and remove, and fills the gap of performing high-performance data loads into the Dell CMDB directly via Boomi rather than using a 3<sup>rd</sup> party ETL tool.

BMC ADDM is a subnet crawling discovery engine. It interrogates systems with an IP address, inventories those systems, and returns that data to a proprietary database. The data collected by ADDM is cross-platform, collected automatically, and constantly updated. Normally, extraction of this data requires manual processes, but Dell Services has used Boomi to automate this process. Using a web based API, Boomi can query ADDM and use that as a basis for process flows, as documented in the above example.

One of the features most coveted by Dell Services is the tracking ability built into Boomi. Being able to watch the data through the entire process and see the change as they occur proved invaluable to Haroon Barlas, Software Developer:

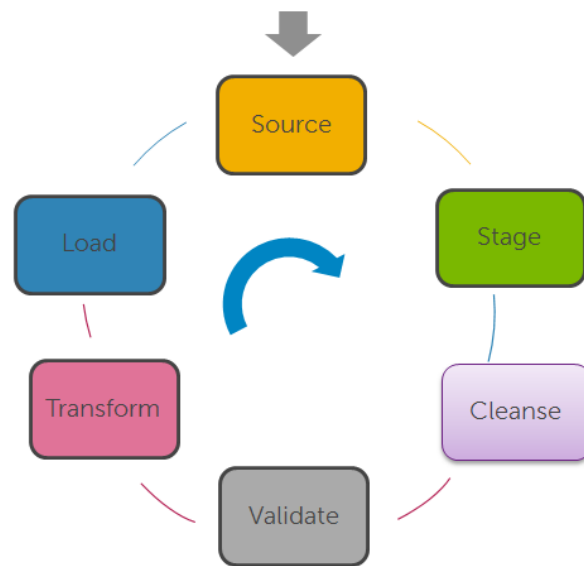
*"Our Development teams often have to look up logs in different places to try to piece together the root-cause of a production issue. With the end-to-end tracking and logging of a data point all the way from customer's system into Dell's Service desk, we find this becomes a much easier task. Now we just need to check status in one place."*

For Asset Management and automated data loads into CMDB, once Boomi has collected asset information from the various data sources (Dell Kace, Microsoft ConfigMgr, etc.) it can perform a series of steps before the data gets loaded into the CMDB.

Typical database connectors are used to query Dell Kace and Microsoft SCCM. These connectors are designed to query data from those customer data sources, and optionally update those databases when necessary. Using a process that was developed in very little time, Dell services can consume the output of those Systems Management solutions and have the data ready for the Atrium Integration Engine (or



Reconciliation Engine).



Boomi can collect all the raw Asset data and stage it in a local database in the form of a common schema which, in its entirety, represents a collection of assets. This common schema is comprised of all the data points from Dell Kace, Microsoft ConfigMgr, BMC ADDM etc. that identify the asset. Once this data is staged, it can be cleansed, validated and transformed using a combination of Boomi and PL/SQL db programming. The delta asset information can then be loaded into the CMDB through Boomi. Loading just the delta records, which refers to new or changed assets only, prevents redundant data transfers and dramatically improves performance.

Boomi's quick, efficient, and simple development environment, coupled with the reusability of its connectors ensures that Dell Services can deliver automation across a wide variety of customer infrastructures, according to Donnie Taylor, Systems Architect:

*"Simply put, using Boomi reduces cost and increases agility. It enables us to be proactive with our monitoring and management technologies, standardize our asset management processes, and eliminate complex technologies. It is a win-win for Dell Services and our customers. "*