stonebranch

TECHNICAL BRIEF

Universal Controller

A Stonebranch Technical Paper

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1.   Summary

A single solution for the enterprise

Stonebranch provides an enterprise job scheduler and workload automation broker that allows you to manage the workload of your entire enterprise on any platform, from a web-based interface. Universal Controller is a modern, simple to use solution that is re-inventing the way IT can automate the business that matters most to their customers. With its simple installation and highly visual management capabilities, our customers are finding it quite easy to provide other areas of IT, as well as the business areas, with the level of automation that can give them a competitive edge. With its modern architecture and intuitive capabilities, Universal Controller could be the last scheduling or workload automation solution you will ever need. Discover Universal Controller now by reading our technical brief.

2.   Modern, efficient automation solution

Imagine a modern, efficient automation solution for any web-enabled device to drive immediate business processing

Stonebranch has been delivering the solutions its customers have imagined for over a decade. Whether you have dozens of servers, or thousands, Universal Automation Center can help modern IT organizations that need dependable and guaranteed results. Our product provides enterprise-wide automation of complex IT business processes in a simple, intuitive way.

For companies just exploring their initial automation solutions, or for long-term companies with decades of scheduling and automation experience, the business demands of today's IT customers require rapid implementation and dynamic ability to process both planned and random data to support their business mission. These companies need a simple-to-use, yet comprehensive and cost-effective solution that would allow them to organically create a modern method of automating their most critical business data.

Basic Job Scheduling is a fundamental component of the more comprehensive and dynamic Workload Automation tools. Stonebranch was the only vendor that imagined providing independent agent technology that has allowed their customers to extend the job scheduling capabilities across the enterprise without being locked into a single vendor solution. This imaginative agent technology has now combined with the industry's most modern workload automation engine capability on the market to deliver comprehensive automation that includes built-in functions like graphical reporting, database queries/procedures, application automation, and z/OS restart, all from a 100% Web-based engine.

With Universal Automation Center, Stonebranch delivers the most innovative and modern workload automation solution available on the market. Written with the latest technology, the architecture and the driving engine, the Universal Controller is much easier to use and provides many built-in capabilities, rather than separate add-on components that create complexity and come at an additional cost to the customer to license and maintain.

3.   Universal Automation Center

Intelligent automation for the modern data center

Universal Automation Center can allow you to automate your 21st century business processing, securely manage file transfers, or extend a legacy scheduling solution throughout the enterprise using newer technology to achieve a more intelligent, yet simple, automation solution.

Universal Automation Center consists of:

- Universal Controller
- Universal Agent (Used with any scheduling engine)
- Universal Data Mover
- Universal Data Mover Gateway
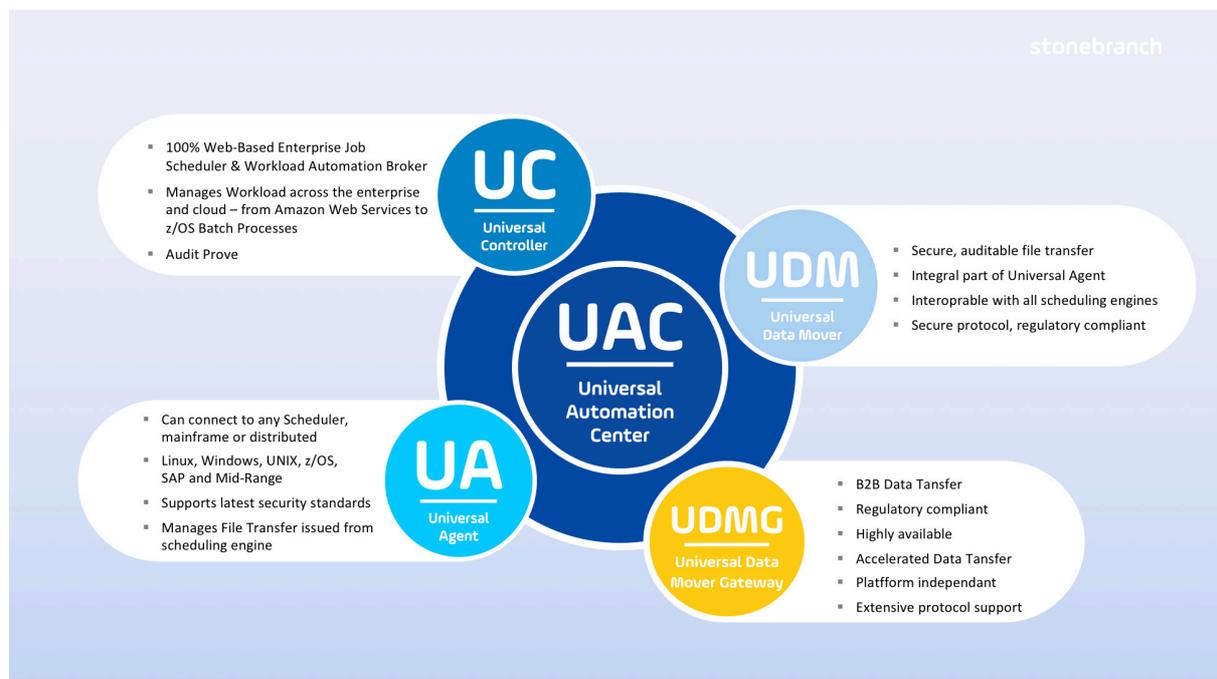
Figure 1: Universal Automation Center

Whether your automation needs are simple or quite complex and cumbersome, the capabilities of the Universal Automation Center can be managed using a 100% Web 2.0-based interface, where they can automate these tasks into a cohesive workflow you've imagined—giving your entire IT organization and even your business users transparency into the system, as well as operational control, allowing you to:

- Reduce Outages
- Ensure Compliance
- Ease Troubleshooting

4.　Universal Controller

Comprehensive visualizations of your data and workflows

Universal Controller is the core component for driving the workload processing using an intuitive interface coupled with a dynamic automation engine that can execute planned and unplanned workload to meet the changing business demands. Universal Controller was designed to exploit the latest Web 2.0 technology to provide extremely simple usability.

Workflows can be constructed for logical business processes and can include various types of tasks, with different run frequencies, different start times, or a number of other variations designed into a single workflow, making definition changes even simpler. This can drastically reduce the number of definitions that must be maintained compared to other vendor products that require replicated definitions should there be variances from day to day or with different executions.
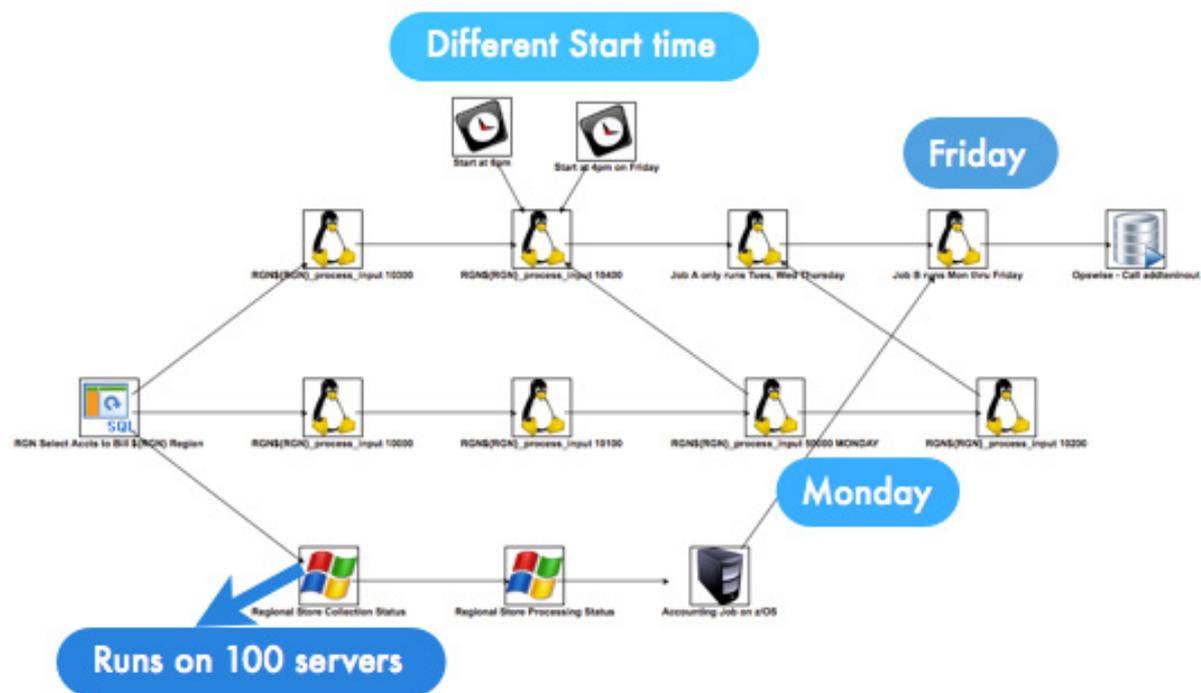

Figure 2: Universal Controller: Graphical Workflow

Fault tolerance is built into the components within Universal Controller and within the Universal Agents. Customers needing High Availability can utilize the extension option that allows for failover to occur instantaneously, even across different types of platforms.

Imagining a Different Approach to Automation

The Universal Controller uses a different approach to managing workload.

- 100% Web 2.0-based User Interface – No thick client here, or "limited functionality"Web interface. This interface is also used for administrators as well.
- No "schedule-load" concept, workload can be initiated immediately, based onbusiness activity, both planned and random or unexpected.
- No kludgy "scheduling" techniques to learn.

- Advanced customization to facilitate secure, role-based views.
- Various notification methods to keep people automatically informed
- Secure, customizable screens for self-service automation by end business users
- 'One to Many' method of defining like workload to be distributed to many machines

Also different in Universal Controller is the thorough ability to manage z/OS workload either by hosting the manager on a z/Linux platform or by using the z/OS Universal Agent. This agent allows you to completely manage the workload on the mainframe and even include JCL restart capabilities as a feature, versus a separately licensed "product". This can be another cost savings of using Universal Controller with the z/OS agent

- **File-based Automation** – Incoming files are a trigger to many business-processing activities. Sometimes, though, these files get corrupted or finish with errors, yet the processing has been initiated without the error being detected. Universal Automation Center allows you to define workload tasks as regularly scheduled work, or as unexpected triggers
- **Application Automation** – Validate the status, or start/stop the application (including mainframe applications) prior to processing.
- **Environmental Sensors** – Validate disk space is available prior to sending or receiving large files, or processing the workload.
- **Cloud-Enablement** – Enable workload processing on a cloud-based engine, cloud-based Open Agents or run the entire solution in a cloud environment.

Flexible Commercial Licensing Terms

Software cost does not stop at the purchase price. Renewals and maintenance, both software cost and people effort, can create quite an impact to your IT budget. Customers licensing based on software MIPS or MSU on the mainframe, or even CPU or number of cores on distributed, can see huge jumps in maintenance costs, even if you are not processing any additional jobs. Even though the machine power has nothing to do with the volume of workload being submitted, vendors are still pricing their software and maintenance using these measurements. Stonebranch has flexible licensing terms that make sense for today's business needs.

Installation/Upgrade	Day-to-Day Activities	Business Value
Windows, Unix (AIX, HP-UX, Solaris), and Linux can house the core component and talk to a variety of agents, including z/os, iSeries, and others.	Exploit automation capabilities during design and development. Automate promotion thru Application lifecycle.	Workload processing can be immediately triggered when business transactions occur, without excessive IT overhead.
Agent self-registration can reduce configuration efforts, accelerating the ability to dynamically configure agents on virtualized servers or in the Cloud.	Visualization across the infrastructure – workflows, tasks, agent status, and audit information. Reporting and remediation tools are included.	Universal Controller provides validation as well as immediate processing triggers to ensure accurate and timely processing.

Failover from one platform to another. Then fail-back without an outage to re-sync the data. Guardian processes ensure availability of key components.	Security can be defined so that business areas can see their workload, and only theirs. They can also be notified immediately when things go wrong and be kept up-to-date with expected resolution times.	Having access to customized dashboards can allow business users to be more informed on the workload status. IT can enable access to application developers as well as data center personnel.

Table 1: A Noticeable Difference

4.1.   New Capabilities - Universal Controller Advantages

Bundle and Promotion

The Universal Controller continues to move forward with innovative capabilities included in the base product. including unique abilities to include lifecycle change management that allows you to bundle and promote various components of the workload definition into a package that can be promoted from one stage in the lifecycle to another. This gives you the ability to manage the change and rollback in its entirety if there are problems. Most other workload automation solutions charge extra for this capability rather than including it as part of the base functionality.

Central Script Repository

Universal Controller includes a central script repository allow you to further lock down the access to production servers. The script will be deployed at run time. Troubleshooting information can be retrieved from the agents using the Universal Automation Center interface, without the need for users to have logon access to production servers.

Versioning

Any change that is made to an artifact within Universal Controller is now versioned. Allowing you to retain as many versions as desired. This can further support the need to restore a definition to a prior version.

Online Wiki-Like Documentation

All documentation for Stonebranch solutions is available online, and in PDF format as well, using a content management solution called Confluence.

Enabling Business Growth

Automation must accelerate your ability to deliver revenue-generating or business service capabilities to the customers

- What does IT need to provide to enable business growth?
- How can you be more competitive in your market?
- How can IT initiate workload processing immediately based on changes or business transactions?

Using a simpler, yet powerful solution can minimize much of the complexity required today to maintain your current solution. Automation should not require months of training to understand archaic terminology and complexities in an aging solution. It should be flexible and powerful to meet the needs to today's business demands.

Universal Controller is the key that can unlock the accessibility, accountability, and visibility to manage the workload that matters most to your company.

Dashboards, Reporting & Customization

IT must be able to manage the workload according to the business priorities and understand the potential affect that delayed workload might have on the business. Customized dashboards can be created and reports can be generated, exported as PDF, Excel or XML formats and can be automatically scheduled as emails to interested parties.

Application and Environmental Control

Rather than have workload failures occur, you can validate the application status, or even control the status, to ensure the successful execution of workload. You can also check for environmental conditions like disk space before transmitting or creating a large file.

Self-Registering Agents

Easily install and configure new agents, whether they are physical, virtual or cloud-based. No more waiting on a change request and an administrator to update the configuration and topology on another server. Graphical displays can even show you the status of the agents.

Clustering for Availability and Efficiency

Clusters make fault tolerance and high availability possible out-of-the-box. Load balancing can be defined and the broadcast option can allow you to use one task definition that can automatically be broadcast to all agents within the cluster, drastically reducing time and effort.
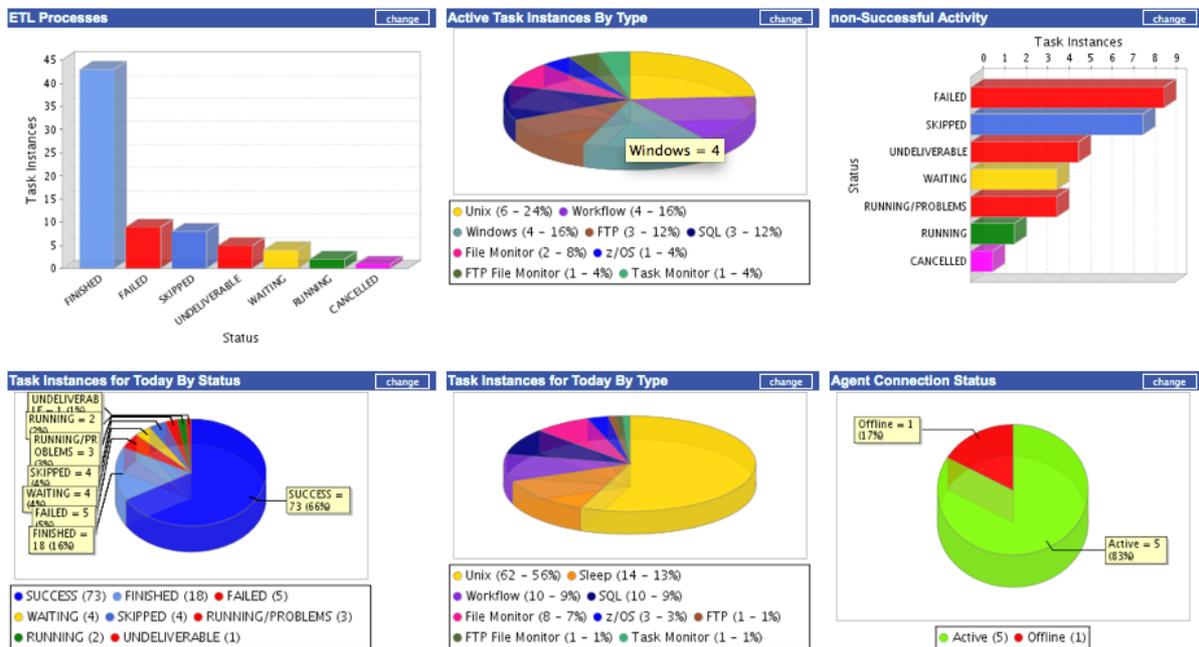
Figure 3: Universal Controller Executive Dashboard

Modernize Your Automation Capabilities

Using the Universal Controller, customers can update the management of their business data processes to a more simple-to-use modern Workload Automation and Job Scheduling solution, one that can be adopted throughout IT to intelligently and more cost-effectively

process your mission-critical data. Universal Controller is the core engine driving further visibility and extendibility with other Stonebranch products, including Universal Agents, and Universal Data Mover.

Universal Automation Center will help you improve the efficiency, adoptability, and flexibility for your data processing needs. By embedding simple built-in functionality, rather than a complex array of products, each licensed and managed separately, Stonebranch can simplify your automation configuration. Where our competitors often charge additional licenses/maintenance and require additional servers to support the new components, Universal Automation Center includes these capabilities in the base software.

- Reporting – Audit, History, Active, etc.
- Forecasting
- Service Level Management
- File Management
- Application Automation
- Database Queries and Stored Procedures
- z/OS Restart Automation

Portable and Mobile Access Using Modern Technology

Rather than having multiple, partially-enabled, user interfaces, Universal Automation Center has one user interface that is 100% web-based and provides complete functionality from web-enabled devices, including smart phones.

This award-winning interface allows even the novice user to quickly become proficient and exploit the automation solution to develop more intelligent processes. Pre-built dashboards can instantly provide the information vital to specific IT roles. You can also easily modify or create customized dashboards with charts, graphs, and gauges to display the exceptional information important to servicing your business.
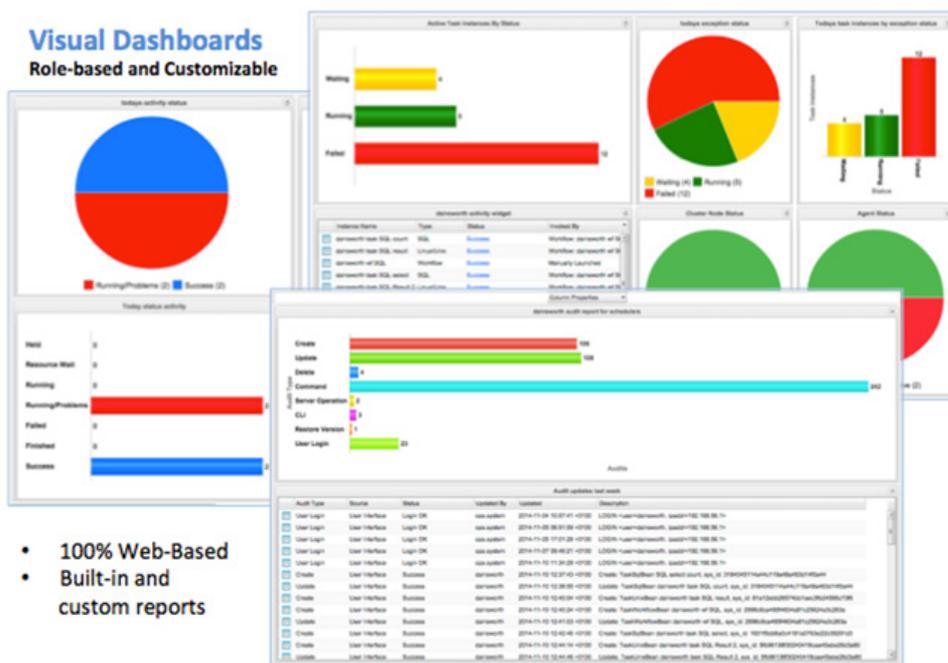
Figure 4: UC – Dashboard UI, Full Admin Access