

World's Largest E-commerce Fulfillment Company Dramatically Improves Transaction Speed with Web Services Technologies from iWebSrv

Most people don't know that some of the largest online retailers in North America outsource part or all of their online order-processing and fulfillment functions to third-party companies. Often referred to as fulfillment houses, these companies stock the retailer's product in their warehouses and take, process and ship orders through hooks within the retailer's online shopping carts. This all happens under the covers, with shoppers having the experience of purchasing directly from the online retailer. Fulfillment companies help online retailers more easily scale their operations while significantly reducing operational expenses and capital expenditures.

Radial is the largest such fulfillment company in the world, providing online-ordering and product-fulfillment services for over a 100 major online retailers, including Dick's Sporting Goods, Kate Spade, Ralph Lauren and Estee Lauder. Processing millions of orders per year via 26 strategically located warehouses, Radial runs applications on IBM i that handle all aspects of order processing for its customers including inventory control, order fulfillment, payment processing, pricing and much more—all seamlessly integrated with the e-commerce websites and back-end business applications of Radial's customers.



A PRIORITY OF CONTINUAL IMPROVEMENT

Keeping existing customers happy and attracting new business requires Radial to continually find ways to both improve the experience for shoppers and the bottom line for retailers. Toward this end, Radial's Senior Director of Global Shared Services, Joe Marx, had been looking for ways to increase the efficiency with which its web-facing order-processing functions communicate between their customers' e-commerce sites and Radial's back-end order management applications.

"The interface between systems is different for each customer with each configuration having different limitations," says Joe. "Because of this, it was becoming increasingly difficult and time consuming to setup and maintain the necessary connections to keep data flowing efficiently between our systems and those of the customer. We were constantly having to start from scratch to create the interface and develop sockets, APIs and other necessary functions."

Joe learned about the iWebSrv offering from e-PFR Technologies and was impressed to learn that its innovative web-services architecture had the potential to significantly improve transaction speed and increase security while also reducing complexity for Radial's IBM i developers as they work to create integrations with each customer's system.



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Joe Marx, Senior Director of
Global Shared Services, Radial



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Joe Marx

“We set up a prototype with iWebSrv and were very happy with the results,” says Joe. “After that we used the software to change integrations for selected customer environments. We not only found significant improvement in transaction speed, our developers were able to implement changes and new data-exchange functions far more quickly. Today all of the interfaces with our customers are being handled by iWebSrv.”

EFFICIENT EVENT-PROCESSING MODEL

Uniquely designed and architected for the IBM i, iWebSrv is a web-services framework that isolates web input and output processing (the front-end) from IBM i production environments, associated programs and databases (the back-end). The communication between the front-end and the back-end utilizes an extremely efficient, event-driven processing model. By isolating front-end functions from back-end databases, iWebSrv provides an important layer of security. In addition, iWebSrv gives IBM i developers the tools necessary to easily create new web integrations without the need for any knowledge of the HTTP server or other web complexities. Developers only need to format responses with JSON and XML. In addition, redundancy and backup are built into the architecture as it allows multiple front-ends and event queues to connect to the back-end with the ability for transactions to be processed by the front-end in a round-robin fashion to distribute workloads.



“The speed of the web-services functions of iWebSrv is tremendous,” says Joe. “For instance, inventory lookups and other data exchanges are now happening in near real time for our customers.”

MILLIONS OF WEB REQUESTS IN NEAR REAL TIME

With iWebSrv in place, Radial processed 130 million near-real-time web requests for its customers in 2017, with one major retailer processing nearly 500,000 online orders on Cyber Monday alone. For 2018, Radial is projecting it will process 400 million web requests using the web-services functions of iWebSrv.

“iWebSrv acts as a highly efficient and adaptable middle layer between front-end and back-end systems” says Joe. “The plumbing is all there, making it easy for our developers to use it in whatever way we need to fulfill the rapidly changing requirements of our customers. Nearly all of the functions of iWebSrv are parameter-driven, which means our IBM i developers no longer need to worry about AJAX and infrastructure coding for front-end configurations. Because of this our developers are able to focus significantly more time on important back-end development projects. iWebSrv gives us a highly scalable platform upon which we can quickly turn around client requests for new interface functionality within their e-commerce and other systems. All of this has made it possible for Radial to keep our customers happy while providing competitive capabilities that bring in new business.”

