ARIS/SmartBus® communication middleware

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Connects ARIS® products to external systems

The ARIS/SmartBus communication middleware is the technology layer surrounding the ARIS/SmartBase® database that enables information exchange between the ARIS/SmartBase database and external systems and between the ARIS/SmartBase database and external devices, such as tablets, smart phones, mobile pagers, dispatch devices, and clock-in and clock-out devices.

The ARIS/SmartBus communication middleware supports multiple connections, enabling information to flow between the ARIS/SmartBase database and multiple external systems simultaneously. When you rely on the ARIS/SmartBus communication middleware to handle your information flow, you can disseminate critical business knowledge throughout your organization while you reduce the cost of interface development, deployment, and maintenance.

Increases organizational efficiency and effectiveness

In many organizations, the same information often appears in many different computer systems, and each system often represents the same information differently, which prevents automatic information exchange. As a consequence, you can waste valuable time entering and re-entering information manually and creating inefficient workarounds to compensate for systems that cannot talk to one another. Considering manual data-entry error, unproductive time, and lost opportunity, the cost can be substantial.

The ARIS/SmartBus communication middleware increases organizational efficiency and effectiveness by enabling information to flow between the ARIS/SmartBase database and external systems rapidly, reliably, and accurately. The ARIS/SmartBus communication middleware:

- Integrates information stored in the ARIS/SmartBase database with external systems, such as flight-following systems, accounting systems, and HR systems, as well as sources of real-time information

- Monitors and controls the information flow between the ARIS/SmartBase database and external systems
- Provides a redundant communication infrastructure that minimizes the effect of server and network failures
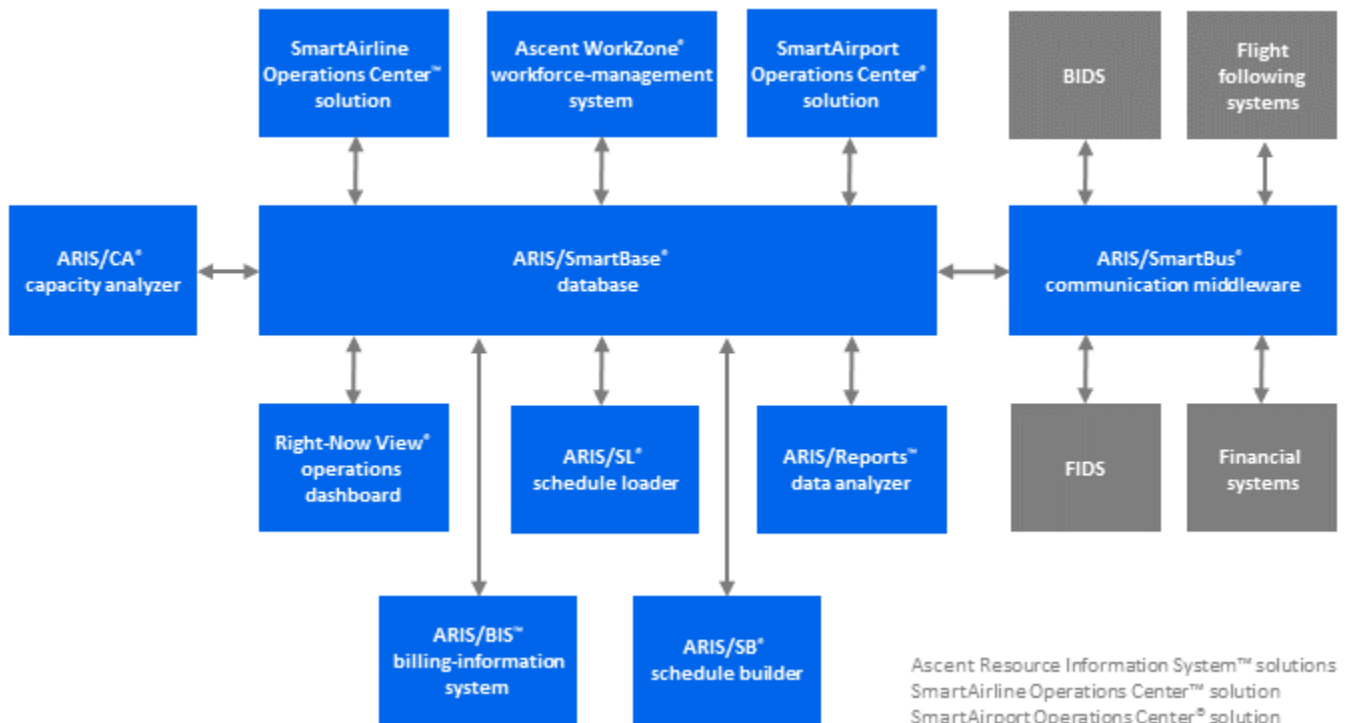- Provides the ability to view what is actually happening in your organization

Using the ARIS/SmartBus communication middleware greatly reduces the time, effort, and cost involved to integrate enterprise systems.

Relies on industry-standard connectivity protocols

We configure the ARIS/SmartBus communication middleware to meet your requirements, assembling the most appropriate set of modules from the ARIS/SmartBus communication middleware toolkit. The two most typical configurations involve:

- Table-to-table interfaces that transfer information between the ARIS/SmartBase database and an external Oracle® database
- Messaging and web-enabled interfaces

We interface each system that will exchange information with other systems with an ARIS/SmartBus communication middleware adapter, which ensures the proper transfer of information from one system to all other interfaced systems. Information can then flow to one, some, or all of the systems. Some information may be routed to the ARIS/SmartBase database for archival storage, while other information can be routed to bypass the ARIS/SmartBase database entirely. The ARIS/SmartBus communication middleware eliminates the need to build individual interfaces between each system and other systems that require its information. Instead, you build an interface between each system and the ARIS/SmartBus communication middleware, significantly reducing the number of interfaces to build and maintain.

Ascent Resource Information System™ solutions
SmartAirline Operations Center™ solution
SmartAirport Operations Center® solution

Who we are

Since our founding more than 35 years ago by members of the Massachusetts Institute of Technology Artificial Intelligence Laboratory, Ascent Technology has helped organizations deploy costly resources as efficiently, effectively, and economically as possible. Our highly trained and capable team of technologists, problem solvers, and solution designers has broad domain expertise and substantial experience in artificial intelligence, computer science and engineering, system design, mathematical optimization, operations research, and resource optimization, planning, scheduling, and management.

Representative features

Lowers integration costs. Industry-standard connectivity protocols and built-in adapters reduce the need to develop costly customized interfaces between individual systems.

Coordinates business knowledge. The ARIS/SmartBus communication middleware enables information to flow between the ARIS/SmartBase database and external systems rapidly, reliably, and accurately so that users throughout the organization view consistent information.

Tolerates outages. If an external system is unable to receive message updates, for example, because of a network outage, the ARIS/SmartBus communication middleware automatically queues the updates for transmission later. No data is lost due to temporary network failures.

Improves organization efficiency. The ARIS/SmartBus communication middleware reduces costs associated with rekeying errors and poor coordination, while it enables organizations to exploit new opportunities.

Supports industry-standard information-exchange mechanism. Information appears in easily-to-read ASCII format, which simplifies data-traffic monitoring. The product supports web-services transmissions, such as Simple Object Access Protocol (SOAP).

Scales to meet the needs of organizations of all sizes. The ARIS/SmartBus communication middleware can be used to interface the ARIS/SmartBase database to a single external system as well as to multiple systems, data feeds, and databases.

Supports a range of fault-tolerant configurations, from simple single servers to sophisticated parallel clusters. With the most sophisticated hardware configuration, information continues to flow between systems despite the failure of one or more components.

Provides continuous information flow over a variety of operational conditions. The ARIS/SmartBus communication middleware is tuned to ensure information distribution is timely regardless of the level of message traffic between systems.

Provides management reports. You can use log files and monitoring tools, available with the ARIS/SmartBus communication middleware and in other commercial products that operate with the ARIS/SmartBus communication middleware, to monitor the system and provide reports about the data exchanged between specific systems.

Web-enabled for cost-effective rapid and wide deployment. You gain access to the ARIS/SmartBus communication middleware through Ascent's From Touchdown to Takeoff® cloud-hosted service, a secure, highly-available, and readily-expandable platform. When you subscribe to the service, you can gain access Ascent's entire suite of products, including the ARIS/SmartBus communication middleware, using a standard browser directly from your network without any need to install, maintain, and support on-premise hardware and software. We can readily adjust available computing power to meet your organization's changing needs, and you can easily expand your solution to accommodate additional users and to manage additional resources, facilities, and locations.

Ways we can help you

Advisory and consulting services. We provide unbiased advice about resource allocation, optimization, planning, scheduling, management, and deployment methodologies; develop cost-benefit analyses; analyze business processes; manage projects; gather and document technical requirements; develop functional specifications; and specify hardware, software, and devices.

Project-management services. Our project-management team works closely with you, following our time-proven delivery methodology, and uses face-to-face meetings, teleconferences, web conferences, and email exchanges to keep you informed every step of the way. We believe careful project management is the key to successful on-time and on-budget deliveries of Ascent Technology's SmartAirline Operations Center™ solution and SmartAirport Operations Center™ solution.

Knowledge-engineering services. Knowledge engineering is the process of identifying your business knowledge—the business rules, policies, procedures, preferences, and requirements that guide the way your organization operates—and then codifying your business knowledge in the knowledge base at the heart of the SmartAirline Operations Center solution and SmartAirport Operations Center solution. The business knowledge in the knowledge base determines how the solutions behave. Our knowledge engineers work with you to gather and enter the business knowledge that enables the solution to behave exactly the way you want it to.

Implementation, integration, and installation services. Our implementation team provides system integration and testing services; develops product extensions, enhancements, and connectivity software for importing data to and exporting data from external systems; and creates reports. Our implementation team is also responsible for setting up an environment, customized to meet your organization's needs, and monitoring its performance, in our secure hosting center.

Training services. We provide a wide range of user, administrator, trainer, and refresher training classes at your location, at our Boston, MA, headquarters, and remotely over the web. We also provide operational training services remotely when you begin to use the SmartAirline Operations Center solution or the SmartAirport Operations Center solution in production.

Maintenance and support services. We offer premium support services for the SmartAirline Operations Center solution and the SmartAirport Operations Center solution around the clock. We provide comprehensive remote user support services via telephone, email, web conferences, and Internet, as well as software maintenance, such as product updates, patches, and releases. Our customer support community portal and ticket system enable you to ask questions and receive responses, request service, report problems, and track issues day and night.

More information

To learn more about how Ascent Technology solutions can help you optimize your resources to greatest advantage and to schedule a demonstration of our products, send email to sales@ascent.com or call our Sales and Marketing department at +1.617.395.4800.

Ascent Technology's From Touchdown to Takeoff Cloud-Hosted Service

You gain access to the Ascent Resource Information System solutions in the SmartAirline Operations Center solution and in the SmartAirport Operations Center solution over the Internet, using a standard web browser.

Ascent Resource Information System solutions SmartAirline Operations Center solution SmartAirport Operations Center solution	From Touchdown to Takeoff cloud-hosted service Browser support: Google Chrome, Microsoft Edge, and Mozilla Firefox Minimum Internet connection speed: 5 Mbps Minimum resolution: Full HD (FHD)
ARIS/AV® aerial-view display	✓
ARIS/BB® baggage-belt allocator	✓
ARIS/BIS™ billing-information system	✓
ARIS/CA® capacity analyzer	✓
ARIS/CI® check-in counter allocator (with ARIS/IQ® queue manager)	✓
ARIS/FW® flight watcher	✓
ARIS/GateView® real-time display	✓
ARIS/GM® gate manager	✓
ARIS/Reports™ data analyzer	✓
ARIS/SB® schedule builder (with ARIS/LegGen® flight-leg generator)	✓
ARIS/SL® schedule loader	✓
ARIS/SmartBase® database (with Resource Editor tools)	✓
ARIS/SmartBus® communication middleware	✓
ARIS/SP® stand planner	✓
Ascent WorkZone® workforce manager	✓
ARIS/WorkModel® workload generator	✓
ARIS/WorkNet® bid and trade manager	✓ *
ARIS/WorkOptimize® work-period generator	✓
ARIS/WorkPlan® work-schedule generator	✓
ARIS/WorkRelay® task and attendance monitor	✓
ARIS/WorkTime® workday manager	✓
Right-Now View® operations dashboard	✓
ARIS/CX® crew-connection analyzer	✓
ARIS/FR® flight-readiness display	✓
ARIS/PX® passenger-connection analyzer	✓
ARIS/TE® tug-equipment assigner	✓
Gate Chart Display™ tool	✓
Stand Assignment Optimizer™ tool	✓

* Minimum requirements: 512 Kbps Internet connection speed and SXGA resolution