

Expand Your Data Reach & Improve Quality Monitoring

InfinityQS® Automated Data Collection (ADC) is an optional service that facilitates fully-automated data collection from a variety of plant and enterprise systems. This enables you to capture quality, environmental, process, and manufacturing information—and provides you with a clearer understanding of product quality and process performance.

Expand Quality Monitoring & Improve Results

Modern manufacturing facilities include a wide range of measurement devices and control systems. With digital transformation and the Industrial Internet of Things (IIoT) starting to expand the range of data available to manufacturers, why not incorporate these expanded data streams for monitoring products and processes? ADC automatically gathers data from these systems, providing your quality and operations teams with broader visibility into the quality performance of your sites.

Many manufacturing processes do not lend themselves to manual data collection. High operating speeds, enclosed machinery, or extreme operating conditions can make manual data collection impossible or unsafe. By expanding your Enact subscription to include automated data collection, you are able to monitor more of your processes and increase the value of your quality monitoring program.

Improve Operator Efficiency

ADC enables your operators to spend less time collecting and recording data—and more time monitoring and controlling manufacturing processes. The data gathered using ADC also enables operators to better understand process variability and take immediate steps to reduce it, improving both efficiency and effectiveness.

Improve Data Integrity, Accuracy & Context

ADC eliminates manual data entry errors and omissions while improving data accuracy. This enables you to finely tune data sampling so that a complete data record is captured every time.

Adding contextual data can dramatically improve the analysis of quality issues. ADC connects to most systems of record, such as ERP or MES systems, and extracts information including part name, part number, lot, batch, and more. Data from control systems—such as temperature, humidity, and pressure—can round out the conditions that were present during a manufacturing run so your team can quickly zero in on the root cause of a product quality problem.

What Types of Data Can ADC Send to Enact?

Enact includes a powerful SPC engine that accepts the following data from ADC:

- Subgroup data
- Lot status data
- Part data
- Process state data
- Specification limit data
- Production assignment data

Key Capabilities

Broad Data Source Connectivity

ADC captures quality, process, and manufacturing data from a wide variety of sources, including:

- › OPC UA & DA servers (.COM, .NET)
- › Flat files (.txt, .csv)
- › Serial, RS-232
- › TCP/IP
- › XML sources
- › Databases
- › Wonderware®
- › GE® Historian

Configurable Data Sampling

Because every manufacturing process is different, ADC enables you to configure data sampling parameters so you can accurately sample your process data streams—ensuring meaningful statistical analysis of your process data. ADC can also be configured to automatically filter out unwanted data during line startup, line down, and idle states.

Data Centralization

Quality data and supporting process data—from all of your sites—is stored in one highly secure and always available location, greatly simplifying data analysis and reporting.

How It Works

ADC captures subgroup and process data from multiple data sources simultaneously and stores these data in the Enact central data repository, which is hosted on the highly-secure Microsoft Azure cloud.

ADC uses the InfinityQS Data Management System (DMS) and Data Collection Service (DCS). DMS harvests or collects subgroup, master data (e.g. ERP), and process data from your plant systems. DMS is a Windows service that uses a set of data providers (included with DMS) to connect to your data sources and capture data values based on configurable sampling parameters. DCS is then used to transfer the data collected by DMS to the Enact data repository for final storage.

Both DMS and DCS should be installed on a dedicated server that can access your data sources and the internet. Each of your sites using Enact will need a copy of DMS and DCS. ADC enables you to install any number of DMS/DCS instances across your manufacturing sites.

Once configured, DMS and DCS run as background Windows services. No additional interaction is required by your Enact system administrator or users.

What Manufacturing Scenarios Benefit from ADC?

Any highly-automated manufacturing process is an excellent candidate to use ADC. Common use cases include companies who:

- › Connect to PLCs, process control, or HMI-SCADA systems to gather subgroup and process data
- › Connect to vision systems, checkweighers, coordinate measuring machines, laboratory equipment, or inline analytical equipment
- › Capture subgroup data from difficult or dangerous-to-access process equipment
- › Connects to plant systems to transfer specification limit data to Enact
- › Add contextual data from ERP or MES systems

How Do I add ADC to my current license?

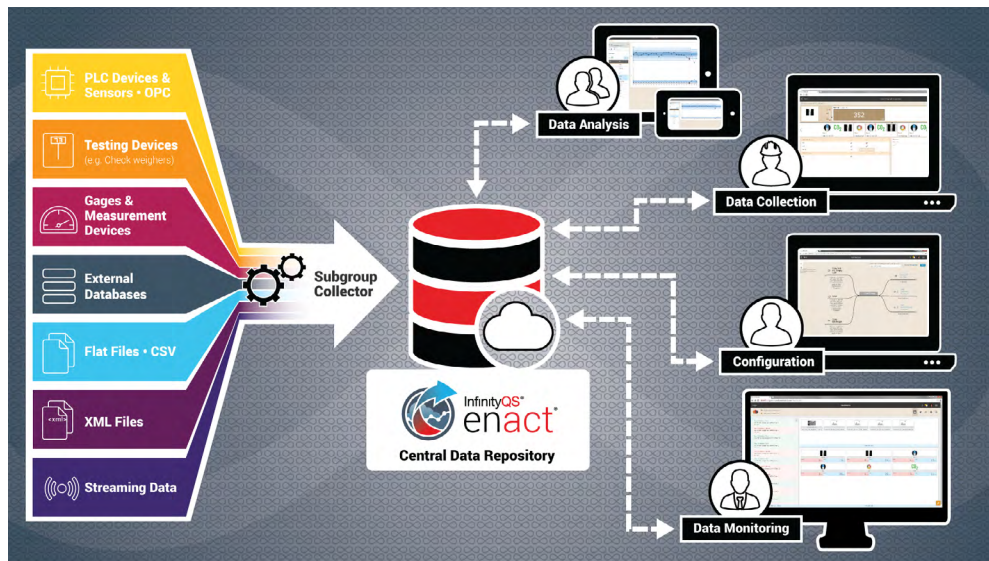
ADC is an optional service. To begin using ADC, simply install the required InfinityQS DMS and DCS tools within your network. Any time ADC is used, all licenses in your Enact subscription are charged a nominal fee during that monthly billing period.

Technical: Data Providers

ADC captures data from measurement devices and systems using DMS data providers. The following table showcases the available data providers.

Data Provider/Collector	Description
Database Provider	Retrieves data from database tables, assembling and publishing data to DMS.
GE Historian Provider	Connects to the GE Historian servers, assembling and publishing data to DMS.
Grid Data Provider	Parses data streams from serial devices, TCP/IP devices, and data files (for example, tab- or comma-delimited files).
Mux (multiplexer) Device Provider	Reads data from a mux device connected to multiple measuring devices, such as micrometers and calipers, attached to a single workstation.
OPC Provider	Connects to OPC UA or DA servers, assembling and publishing data to DMS. Connecting to PLCs is a common application for the OPC Provider.
Wonderware Live Provider	Connects to Wonderware systems, assembling and publishing data to DMS.
XPath Data Provider (XML)	Extracts specific data selectively from an XML source and publishes the data to DMS.
Spec Limit Data Collector	Enables DCS to send specification limit data to the Enact database.

ADC System Diagram



Transform Your Quality Program to the Next Level

Want to understand how ADC can help move your quality program forward? Email us at GetInTouch@infinityqs.com or call us at +1 800.772.7978.