# ACSELERATOR TEAM<sup>®</sup> SEL-5045 Software

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Devices	All Devices		Collection	1	Start Date 01/01/2017	Pref Pref	
TEAM Status	▼▲ localhost	Device	Details SOE Event VISSI	Profile TEAM Jobs		002	202018 Updat
C Settinos	Examples						
	TEAM Collection		Timestamp	Event Type	Els Tax		
	SEL-300G		01/05/18, 11:18:59.748		rine type	Download	Device
	SEL-3519-7					Download tile	SEL-3004
	SEL-421-4						
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### Automated data collection

- Automate data collection to accelerate root cause analysis.
- Collect data from your devices—regardless of connection medium or intermediary devices.
- Simplify data storage management by consolidating power system data in a central repository.
- Accelerate fault locating with continuous background monitoring, and notify stakeholders upon new event collection.



### **Product Overview**

#### **Expedite Data Collection**

Spend less time gathering and more time analyzing the information generated by your devices. When something happens—whether it's a relay trip, system fault, or security notification—AcSELERATOR TEAM SEL-5045 Software is ready with continuous background monitoring and reporting. This ensures the data are there when you need them to help determine root cause, maintain records for regulatory compliance, and keep your system running at peak efficiency.

TEAM operates as a set of Microsoft Windows services that continuously collect data from devices. All collected data are stored either in the AcSELERATOR<sup>®</sup> Database (a PostgreSQL database) or at a specified disk location.

The TEAM Web Server provides read-only access of TEAM system information and collected data. You can view device configurations and events; Sequence of Events (SOE); voltage, sag, swell, and interruption (VSSI); and load data profile (LDP) data from devices.

Access information about your TEAM installation from a network-connected computer. You can verify Windows services, installed versions, and licensing information and review service logs.

From the Settings page, enable additional TEAM databases and set the time zone for data viewing.

Set a time reference point by simply selecting a data row. The Time Delta adjusts based on the selected row to quickly evaluate the order of operations. View multiple ACSELERATOR Databases, and securely provide read-only access to TEAM-collected data.



Easily view device configuration attributes with a read-only view organized in a tabbed menu. View and verify TEAM configurations for enabled jobs. You can view the polling frequency, when the job was last executed, and other configuration information.

Easily adjust the date range.

					Theme
ocal	host/TEAM		Start Date 01/01/2018	End Date 02/22/20	18 Undate Data
		Y			opdulo Dulu
Device	Details SOE Event VSSI F	Profile TEAM Jobs			
	Timestamp	Time Delta	Element	State	Device
	02/04/18, 09:59:55.968 PST	↑ +00:28:22.759, 7 days			
		↑ +22:34:47.881, 6 days			
		🕈 +21:58:47.839, 6 days	Relay newly powered up		
	02/02/18, 14:51:10.940 PST	🕈 +05:19:37.731, 5 days	SALARM		
	02/02/18, 14:51:09.940 PST	🕈 +05:19:36.731, 5 days	SALARM		
	02/02/18, 14:51:09.860 PST	🕈 +05:19:36.651, 5 days			
	02/02/18, 14:51:00.060 PST	🕈 +05:19:26.851, 5 days	SALARM		
	02/02/18, 14:50:59.060 PST	🕈 +05:19:25.851, 5 days	SALARM		
		🕈 +01:44:34.384,0 days			
+	o 01/28/18, 09:31:33.209 PST				
	01/28/18, 08:47:17.048 PST	🔸 - 00:44:16.161, 0 days			
		🔶 - 23:09:34.508, 4 days	SALARM		
		🔸 - 23:09:35.508, 4 days	SALARM		
		🔸 - 23:11:21:107, 4 days	SALARM		
		👆 - 23:11:22.107, 4 days	SALARM		
		🖖 - 23:15:18.687, 4 days	SALARM		
		🔶 - 23:15:19.687, 4 days	SALARM		
		🔸 - 23:21:30.447, 4 days	SALARM		
		🔶 - 23:21:31.447, 4 days	SALARM		
	01/16/18, 13:47:23.826 PST	👆 - 19:44:09.383, 11 days	SALARM		
	01/16/18, 13:47:22.826 PST	🔸 - 19:44:10.383, 11 days	SALARM		
		🔸 - 20:00:42.891, 11 days	SALARM		
		🔸 - 20:00:43.891,11 days	SALARM		
		🔸 - 20:01:37.981, 11 days	SALARM		
		🔸 - 20:01:38.981, 11 days	SALARM		

### **TEAM Feature Options**

TEAM functionality is licensed as four popular feature sets: TEAM Event, TEAM Profile, TEAM Security, and TEAM Transmission Fault Location (TFL). You can select from the four feature sets to build a TEAM application that best suits your system needs.

#### **TEAM Event**

TEAM Event provides features and functions that make capturing, evaluating, and sharing event data easy. It automatically captures event data from supported SEL and third-party devices in CEV, COMTRADE, and SOE formats. With TEAM Event, you can designate a query interval for TEAM to periodically query devices for new data. For enhanced data collection speeds, you can integrate TEAM with SEL Real-Time Automation Controllers (RTACs). An RTAC provides secure notifications to TEAM of new events and SOE data available for collection.

Oscillographic event data are beneficial for monitoring the system, fault analysis, and troubleshooting purposes. With the Web Viewer, Timeline Viewer, Event Viewer, and SOE Viewer in TEAM Event, you can quickly review oscillographic data and identify important events by type, device, location, or timeline.

TEAM Sync, included with TEAM Event, securely transports event and SOE data between database storage locations for automated data redundancy. TEAM Event can also notify appropriate individuals of new system events through TEAM's automatic email or SMS text messaging.



Quickly identify events using the Event Timeline viewer. Hover over the flags to find the fault trigger time and fault currents.

#### TEAM TFL

Quickly restoring power after a system fault is a top priority. TEAM helps expedite determining accurate fault locations and can email or text results to appropriate individuals. Most digital protective relays or other intelligent electronic devices (IEDs) use local or single-ended measurements to determine fault location. To increase accuracy, TEAM TFL uses a two-terminal fault-locating method based on event information collected at the transmission line's end terminals. When a fault occurs, TEAM TFL receives time-stamped event reports from IEDs or digital fault recorders (DFRs) at both terminals of a transmission line, checks to see if the events are associated with any of the configured lines, time-aligns the event records, and executes a two-terminal fault location algorithm.

#### **TEAM Security**

Use TEAM Security to automate password management and maintain a central repository of managed-device interactions and password reports for disaster recovery. TEAM Security works with the SEL-3620 Ethernet Security Gateway and the SEL-3622 Security Gateway to rotate device passwords on a set interval. When configured, TEAM Security also collects the device commands and the password management and syslog reports generated by the SEL-3620, SEL-3622, and SEL-3025 Serial Shield<sup>®</sup> after new passwords have been generated or on a specified interval.

#### **TEAM Profile**

Load data profiling information contains energy, demand, voltage, current, harmonic, and frequency trends that are useful when managing a large metered area. TEAM Profile automates the collection of LDP and VSSI data from SEL-734 Revenue Meters, SEL-735 Power Quality and Revenue Meters, and SEL-751A Feeder Protection Relays. With the RTAC Trend Recorder library, you can record IED quantities, collect them with TEAM Profile, and trend recorded quantities with ACSELERATOR Meter Reports SEL-5630 Software. You can view meter-generated data with Meter Reports to graph forensic data.



TEAM works with multiple devices in a variety of configurations to meet your system needs.

## **Related API and Applications**

#### ACSELERATOR Database API

SEL-5230 ACSELERATOR Database API provides thirdparty software tools with a representational state transfer (RESTful) interface, allowing them to access TEAM data stored in the ACSELERATOR Database. This provides enterprise-level system integration with your automatically collected data and simplifies integration with the tools used at your company for system management and monitoring.

#### ACSELERATOR Meter Reports

Visualize and design reports based on TEAM Profile data. After TEAM automatically collects and stores the data from the metering devices, Meter Reports displays the information using interactive charts and reports. Embedded math and logic functions help you create simple billing reports and simplify aggregation.



SEL solutions simplify site-wide metering and system integration.

#### SEL-5601-2 SYNCHROWAVE® Event Software

Analyze IED oscillography with SYNCHROWAVE Event. SYNCHROWAVE Event seamlessly integrates analysis with your automated data collection solution. You can launch event reports collected with TEAM Event for quick viewing and analysis in SYNCHROWAVE Event.



### **TEAM Specifications**

#### **Supported Devices**

SEL Devices	Event Collection	SOE Data	Load Profile Data
SEL-300G	•	•	
SEL-311A, B, C, C-1, C-2, C-3	•	•	
SEL-311L, L-1, L-6, L-7	•	•	
SEL-321, -1, -2, -5	•		
SEL-321-3, -4	•	٠	
SEL-351, -1, -2, -3, -4, -5, -6, -7	•	•	
SEL-351A, A-1, D, D-1, J, P, P-2, P-3	•	•	
SEL-351R, R-1, R-2, R-3, R-4	•	٠	
SEL-351RS	•	٠	
SEL-351S-5, S-6, S-7	•	•	
SEL-352, -1, -2, -3	•	•	
SEL-387-5, -6	•	•	
SEL-387A, E, L	٠	٠	
SEL-411L, L-1	•	•	
SEL-421, -1, -2, -3, -4, -5	•	•	
SEL-451-1, -2, -4, -5	•	•	
SEL-487B, B-1, E, E-2, E-3, E-4, V, V-1	•	•	
SEL-501*	•		
SEL-547	٠	٠	
SEL-551*	٠		
SEL-551C	•		
SEL-587Z	٠		
SEL-651R, R-1, R-2, RA	٠	•	
SEL-700G	•	•	
SEL-701, -1	٠	٠	
SEL-710, -5	٠	•	
SEL-734	•	•	•
SEL-734P	٠	٠	•
SEL-735	•	•	•
SEL-749M	•	•	
SEL-751	٠	٠	
SEL-751A	•	•	•
SEL-787	•	•	
SEL-787-4	•	٠	
SEL-849	•		
SEL-2411	•	•	
SEL-2414	•	•	
SEL-2431	•	•	
SEL-T400L**	•		
SEL RTAC	•	•	•

\*ASCII event collection only.

\*\*Events collected from the SEL-T400L Time-Domain Line Protection are in COMTRADE 2013 format, which can only be opened and analyzed in SYNCHROWAVE Event Software.

TEAM also supports event and SOE collection from the following IEDs from other manufacturers:

Alstom P544°	GE B95Plus <sup>▷</sup>	GE F35 <sup>▷</sup>	GE G30 <sup>b</sup>	GE L30 <sup>b</sup>	GE T35⁵
GE B30 <sup>b</sup>	GE C60 <sup>▷</sup>	GE F60 <sup>▷</sup>	GE G60 <sup>▷</sup>	GE L60 <sup>b</sup>	GE T60 <sup>▷</sup>
GE B90 <sup>°</sup>	GE C70 <sup>▷</sup>	GE F650 <sup>b</sup>	GE G650 <sup>⊳</sup>	GE L90 <sup>b</sup>	

<sup>a</sup>Does not support SOE collection

<sup>b</sup>Support for GE devices with firmware version 7.91 and later is accomplished through integrating with RTAC Encrypted Database Listening or polling. Direct polling of event or SOE data is not supported.

Minimum System Requirements				
Supported Operating Systems	Windows 7			
	Windows 10			
	Windows Server 2008			
	Windows Server 2012			
	Windows Server 2016			
Processor Speed	2 GHz dual core			
RAM	4 GB			
Disk Space	40 GB			
Browser	Google Chrome version 56			
Installation	Administrative privileges required for installation			
Communications	Serial or Ethernet connection to allow communication with SEL devices			



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