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# Framework Management Layer User's Guide

Solution Control and Management Functions

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Use the Management Layer's control and monitoring functions to:

- Start single applications or entire solutions through a single control operation from Genesys Administrator.
- Shut down single applications or entire solutions in the same manner.
- Start all or a set of configured solutions.
- View the current runtime status of applications and entire solutions via Genesys Administrator.
- View all processes currently running on any host.
- View CPU and memory usage data for any host.
- View CPU usage data for each thread of a given process of an application.
- Manually switch operations from a primary server to its backup.
- Monitor the health of the NTP service, and change the signature of the NTP service or daemon.

For efficient solution maintenance, you should also use the monitoring functions for both solutions and applications. However, under normal circumstances, Genesys recommends that you always perform control functions over entire solutions as opposed to single applications. This ensures the correct logical order of application startup and shutdown and eliminates unnecessary error log events. In redundant configurations, the solution-level control operations also take into account the configured backup servers and start them up or shut them down automatically along with the primary servers.

Regardless of what level of control—applications or entire solutions—you choose to implement, the same architecture provides the control and monitoring functions. It consists of:

- Solution Control Server (SCS).
- As many instances of Local Control Agent (LCA) as there are computers with Genesys servers and/or with Management Layer-controlled third-party servers.
- Genesys Administrator, through which the control and monitoring capabilities are available directly to a user.

### Important

A single SCS should be assigned to handle no more than 250 hosts and their applications. In this environment, SCS can handle the simultaneous failure of up to 50 hosts, while reflecting the actual runtime statuses of the hosts and affected applications in 15 seconds or less. If an SCS has to handle more than 250 hosts, the time to respond to host status changes might increase, especially if more than 50 of its hosts experience failures simultaneously. If you need SCS to handle more than 250 hosts, Genesys recommends that you configure multiple Solution Control Servers in distributed mode to limit the load on each SCS. Refer to the *Framework Deployment Guide* for information about setting up a distributed SCS environment.

### Manual Switchover

The Management Layer provides an additional control function, a *manual switchover* of an application's operations to its backup application. Use this function, for example, for test purposes, during application upgrades, or during some hardware maintenance procedures. You can perform a manual switchover for any pair of redundant applications on which both primary and backup are running. During the switchover, the Management Layer changes the mode of the selected backup application to primary and the mode of the primary application to backup. The switchover mechanism is described in detail in [Fault Management Functions](#).

You *cannot* manually switch over applications of these types:

- Configuration Server
- Database Access Point
- Solution Control Server

### NTP Service Monitoring

Starting in release 8.1, the Management Layer can monitor the health of the NTP services on supported platforms.

LCA collects information about the state of the daemons at startup, and updates it periodically thereafter, when checking the state of third-party applications. Log events 00-08008 and 00-08009 report that the NTP service is available and is not available, respectively. Refer to the [Framework Combined Log Events Help](#) file for a description of these log events.

You can also configure the signature of an NTP service/daemon. Use the **signature** option in the **[ntp-service-control]** section of the Host object for which you want to configure the signature. Refer to the [Framework Configuration Options Reference Manual](#) for detailed information about this option.

### Permissions

To use Genesys Administrator to monitor solutions and applications, the user must have Read permission for the corresponding objects in the Configuration Database. To perform any control operations on solutions and applications, the user must have Execute permission for the corresponding objects. To receive alarm reactions related to applications and hosts, the user must have Read permission for the corresponding objects in the Configuration Database. For more information about security settings, see the [Framework Deployment Guide](#).

Remember that the Management Layer is a multi-client environment that makes solution-control functions available to an unlimited number of users simultaneously. The proper and responsible use of these functions is crucial for normal solution operations. Consider using the security capabilities of the Configuration Layer to limit access to these control functions to the trained personnel directly responsible for the contact center environment. Furthermore, schedule all control operations to occur during off-peak hours, preferably when the contact center is not processing any interactions, to ensure the availability of the customer interaction functions.

## Controlling Third-Party Applications

You can apply the Management Layer control and monitoring functions to third-party applications that meet the necessary **prerequisites**.

These applications include, but are not limited to:

- SQL servers.
- CRM services.
- ERP services.

### Warning

On Windows platforms, the Management Layer attempts to start an application without analyzing whether the application can run on an unattended computer (for instance, on a Windows computer with no user currently logged in) or whether the application can operate without a console window. Because the LCA that starts applications is always installed as a Windows Service, all processes start without a console window.