Review Document
Document version: 1.0 – 2015-11-30

INTERNAL

Monitor Traffic and Communicate with Trucks

Document History

Caution

Before you start the implementation, make sure you have the latest version of this document. You can find the latest version at the following location:xxx /xxx

The following table provides an overview of the most important document changes.

Table 1

Version	Date	Description
0.1	2015-11-30	Preliminary Version

Content

1 Monitor Traffic and Communicate with Trucks

The *Traffic Status* application is a central application to monitor traffic and communicate with the trucks and other business partners. This application also helps in tracking the truck positions, sending messages targeted at geofences, trucks, or other partners. The messages targeted towards geofences are automatically dispatched if any truck passes through the geofence.

The active logistic hub incidents are automatically notified by appropriate software integration of logistic hub automation infrastructure with SAP Networked Logistics Hub. The incidents are communicated automatically to the trucks through the telematics platform that is integrated with SAP Networked Logistics Hub.

By default, the *Traffic Status* screen displays the map of the logistics hub location. On the screen, you are provided options to create geofences, bridges, parking spaces, and container terminals. You can also contact business partners, send and receive messages to and from the trucks, and view the truck movements on the map. All active (planned or unplanned) logistic hub incidents and traffic incidents are highlighted on the map. They are also visible in the right pane. In addition, the right pane shows the active communications with the truck drivers and other business partners.

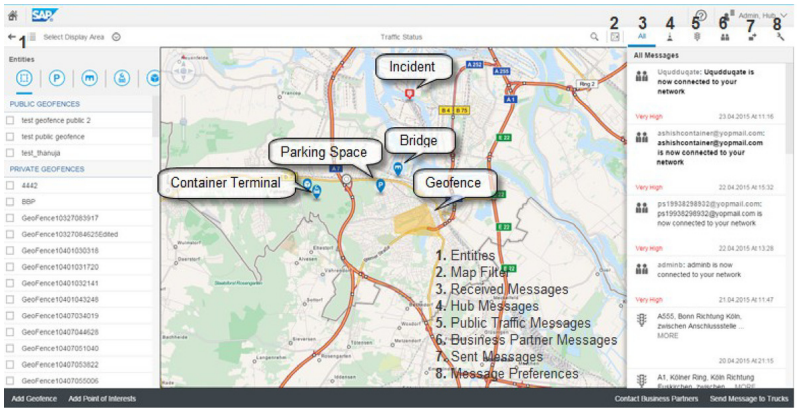


Figure 1

Using this application, you can perform the following actions:

- **Manage Point of Interests**

  You can add bridges, parking spaces, container terminals, and container depots as points of interest on the map. For this, click *Add Point of Interest* and choose the respective option. Mark a location on the map and enter mandatory details and save. You can also edit and delete these points of interest. Click the respective icon on the map to edit or delete. Use the Webcam URL field to enter a link to a public portal where you can view images of parking space, bridge, container terminal, container depot. Use the *Search* option to identify the details of points of interest on the map. For more information about user roles, refer *SAP Networked Logistics Hub - User Roles* [external document]

> **Note**
>
> When creating a container terminal or depot, you can set it's availability status to automatic. Select the *Automatic Status* checkbox.

- **Clustering of Point of Interests and Trucks**

  It is possible to group or cluster all points of interest and trucks separately. Based on the zoom level, the points of interest, that is, parking spaces, container terminals, depots, and bridges are clustered as a single blue icon on the map with the stipulated number. Click the respective points of interest in the *Entities* panel to view them as a cluster on the map. In the case of clustering of trucks, the icon display in black. The trucks are grouped based on three criteria: trucks with associated orders and on time, trucks with orders but not on time, and trucks with no orders associated. Click the individual cluster or icon to view details of point of interests or trucks in the cluster. Click each item to view them on the map.

- **Manage Geofences**

  The *Traffic Status* application enables you to add a geofence, which is a geographical area. Such areas are defined with boundaries and gates, and identified by a name. They are used for geospatial rule-based messaging of incidents to the trucks. Any active incidents within these geofences are notified to the truck driver when the truck passes through the geofence.

  To create a geofence, click *Add Geofence* and mark the points on the map. Enter mandatory details in the *Add Geofence* dialog box. Select the *Public* checkbox to enable other organizations also to view or use your geofence. This option is available only to the Administrator at Hub and Hub Manager.

  Optionally, you can add one or more gates to the geofence. A single side of the geofence (line joining two successive points) is designated as a gate. A gate gives directional reference to the geofence. If an active incident is associated with a particular gate of the geofence, a truck entering the geofence through that gate receives the particular incident message. To add points to a geofence, right-click the edge of the geofence; to delete a point, right-click on the point. You can edit and assign incidents to only those geofences that are created by you.

  To edit, click the edge of a geofence to view the geofence details. Then, choose the *Edit* button.

  You can also optionally assign incidents to a geofence. The incidents can be single or multiple. Use the *Incidents Assigned* column to view the incidents and assign them to the geofence.

- **Observation or Radar Geofences and Messages**

  The Administrator at carrier or Container Terminal Operator must be informed about the entry or exit of a truck into and out of a geofence. With the help of radar geofence, an Administrator at Carrier or Container Terminal Operator is able to keep track of the truck movement with or without a tour attached, within a specific area. They receive messages from SAP Networked Logistics Hub about the truck movement.

  The Container Terminal Operator can also view all the details of the truck by clicking the truck icon on the map. The details such as the order ID and items associated with the tour of the truck displays. In case of multiple stops for a particular tour, an Administrator at Carrier or Container Terminal can receive information about the truck approaching their respective destination. For example, there are two stops (S1) and (S2) owned by the Container Terminal (CT) to be serviced by the truck (A), belonging to Carrier (C). When the truck approaches the stop S1 or S2, the SAP Networked Logistics Hub receives an information. The truck is visible to the owner of stop (S1), that is Container Terminal (CT) only if a business partner relationship exists between the Carrier C, and owner of the stop S1.

  If the truck enters or leaves a radar geofence created by the Container Terminal (CT) when approaching a particular destination, for example, the stop S1, the CT receives a message in the live feed.

  A radar geofence performs the same functionalities as a standard geofence. But, when the rule of receiving messages regarding the truck movement is set, the geofence is termed *radar* or *observation* geofence. A carrier owns the trucks. The observation geofence or radar geofence is owned either by a carrier or container terminal operator.

  - **Carrier and Radar Geofence**

    Using a standard geofence, the Administrator at Carrier who owns the truck can send messages to the truck drivers from the geofence. The Carrier can also assign the rule to receive messages when an owned

truck with or without tours enters or leaves a geofence. The message displays in the *Business Partner* messages and *All* tabs in live feed of the carrier. When a rule is set, the geofence is termed as *radar.* To create a standard geofence, click the *Add Geofence* button and mark the points on the map. Enter the relevant details and save.

- **Container Terminal and Radar Geofence**

  In order to view the details and movement of truck owned by its carriers, the container terminal must be connected to the respective carrier. The container terminal can establish a relation or connect to a carrier using the *Business Partner* application. For more information, refer *Maintain Business Partners* [external document]. Once connected, the container terminal can view all the trucks with details such as the truck number and tour ID, within a specified area on the map. When a container terminal operator creates a radar geofence, the Administrator at Carrier to whom a connection is established receives a message in the live feed. The carrier can accept or reject the option for the container terminal to view the truck details and movement.

  The Container Terminal Operator can also click the newly created radar geofence to view the geofence and gate details. Clicking the *Business Partners Tracking Status* link enables the Container Terminal Operator to view the different carriers and the tracking status. The statuses are tracked, not tracked, and awaiting approval.

  The following scenario's exist:

  - When an Administrator at Carrier accepts the radar geofence from a container terminal, the *Reject* button is enabled for the carrier.
  - When an Administrator at Carrier rejects a radar geofence, the message *Geofence rejected* displays on the map for the Container Terminal Operator. The Container Terminal Operator receives a notification and can initiate a discussion using the chat. Click the *Contact Business Partner* option to initiate a discussion. To send the radar geofence for approval again to the carrier, click the reject message in the live feed. Then, edit the coordinates of geofence displaying on the map.
  - When a Container Terminal Operator modifies the coordinates of a radar geofence, the respective carrier whose trucks are being tracked within the radar geofence receives a message. An approval from the carrier is required to proceed.

  To create a radar geofence, click the *Add Geofence* button. Enter the relevant details. Select the *Receive Messages* checkbox. The respective option must be selected to receive messages when a truck with tours enter or leaves the newly created radar geofence.

- **Notifications**

  The following are the scenario’s wherein an Administrator at Carrier receives messages or notifications from a Container Terminal Operator:

  - Container terminal creates a new radar geofence
  - Container terminal edits the geofence coordinates

  The following are the scenario's wherein a Container Terminal Operator receives messages or notifications from an Administrator at Carrier:

  - Administrator at Carrier rejects a radar geofence
  - Administrator at Carrier rejects a geofence with modified coordinates. When a container terminal changes any other geofence details, an Administrator at Carrier does not receive any message.

  The Administrator at Carrier or Container Terminal Operator can view the geofences by clicking the *Entities* option on the top left of the screen. The geofences can be filtered based on type (geofence/radar) and grouped based on sharing (public/private/shared) and company (my company/other companies.

  - Administrator at Carrier can view the private and public geofences and radar geofences shared by container terminals and in pending or approved status.

- Container Terminal Operator can view the private and public geofences, and radar geofences created by them.

- **Search**

  The *Search* option enables easy free text search of all items related to the map. For a given search term, related points of Interests, geofences, trucks, tours or active incidents are displayed as a quick list. When you click a search result item, it displays the respective object on the map. When you click *View on the map* on the quick list, all the respective objects display on the map. The objects are visible without changing the zoom level of the map. The *View all in list* option displays only when the search results in more than five matching items. When you click this option, the resulting items display in the right pane.

  > **Note**
  >
  > You can search entering the entire search term, part of the search term with asterisk (*) as suffix or prefix, or enter a major part of the search term. You must enter atleast three characters to search.

- **Send Messages to Business Partners**

  Using the *Contact Business Partner* option, you can send messages to specific business partners. You can choose one or more recipient business partners and specify the message text and priority. If you are a Logistic Hub Manager or Administrator at Hub, you can pick the message text from an existing incident. Click the *Send* button to send the message to the business partner.

  These messages are displayed in the live feed of the recipient business partner.

  - A logistic hub manager can send messages to a carrier, parking operator, container terminal and depot.
  - A carrier can send messages to any other carrier or parking operator, container terminal/depot, and administrator at hub, who is the partner.
  - A parking operator can send messages to carrier or parking operator, container terminal/depot, and administrator at hub, who is the partner.

- **Send Messages to Trucks**

  You can choose the trucks to send alerts or messages related to incidents through the map or geofences. The Administrator at Carrier and Dispatcher also receives all the messages on their live feed sent to the truck. Whereas, in the live feed, the messages sent by the truck drivers are displayed, when the truck driver reply to the messages.

  - To send messages to all the trucks, choose the *Select All My Trucks* option from *Send Messages to Trucks*. The application displays the *Send Message* dialog box with the available trucks displayed in the *Trucks* field. The trucks are highlighted on the map. Specify the message text and priority. Click the *Send* button to send the message.

    > **Note**
    >
    > To send messages to all trucks within a cluster, you must first decluster and then select the individual trucks.

  - You can also send messages to trucks using the display area. Choose the *Select Truck via Display Area* option from *Send Messages to Trucks*. The application displays the *Send Messages* dialog box with the available trucks displayed in the *Trucks* field. The trucks also display on the map. Enter the message and select the priority.
  - To send messages to a particular truck, choose the *Select Trucks on Map* option from *Send Messages to Trucks*. The application displays the *Send Message* dialog box. Click one or more trucks on the map to choose or display the trucks in the *Trucks* field. Specify the message text and priority. If you are a

Logistic Hub Manager or Administrator at Hub, you can select the message text from an existing incident. Click the *Send* button to send the message to the truck through the telematics platform.

- To send messages to all trucks within a particular geofence, choose the *Select Trucks via Geofence* option from *Send Messages to Trucks*. The application displays the *Send Message* dialog box. Click one or more geofences on the map or from the list to display them in the *Geofences* field. You can use the *All* checkbox to select all geofences. Specify the message text and priority. If you are a Logistic Hub Manager or Administrator at Hub, you can select the message text from an existing incident. Click the *Send* button to send the message to the truck through the telematics platform.

  > **Note**
  >
  > The Container Terminal Administrator and Parking Space Administrator can send messages to the trucks only through the geofences. The Administrator at Carrier can send messages to only those trucks that are owned by it or shared with it, within a normal geofence.

- You can also send messages to individual trucks by choosing the truck on the map and clicking *Send Message*. The application displays the *Send Message* dialog box. Specify the message text and priority. If you are a Logistic Hub Manager or Administrator at Hub, you can select the message text from an existing incident. Click the *Send* button to send the message to the truck through the telematics platform.

- **View or Assign Tours**

  You can assign tours to a truck or view the existing assigned tours of a truck. Select a truck on the map. If a tour is assigned, the *View Tour(s)* button displays. Click to view all the associated tours. To assign tours, click the *Assign Tour(s)* button to display a list of unassigned tours.

- **Control Visibility of Objects on Map and Apply Display Filter**

  Use the *Entities* option on the top left of the screen to view the geofences and points of interest on the map.Select the respective entities you want to view on the map. For example, when you select the *Parking space* option, the left panel lists all the parking spaces. Select an individual parking space or entity to highlight them on the map.

- **Define Display Areas on Map**

  You can define specific areas on the map as display areas, enabling to view the precise area. A display area is a screenshot of a specific area on the map with defined coordinates. This allows you to monitor trucks in the specific locations and message them promptly. To create or define a display area, pan or zoom the map to mark the precise area. Then, click the icon next to the *Entities* option and choose *Create*. Enter the required details and mark the defined area as the default display area. By default, when you launch the *Traffic Status* application, the display area you selected previously displays.

  > **Note**
  >
  > When logged in a hub manager, you are provided the option to make the display public. Click the *Public* checkbox to enable viewing of the display area.

  You can also select a display area of your company from the dropdown. Accordingly, the map displays the precise area. Choose the *Settings* option in the *Create Display Area* dialog box to mark any of the display area as favorite or default. Choose the respective icon to delete.

- **View Availability of Parking Space and Container Terminal**

  The following colors indicate the status of parking space and container terminal availability:

> **Note**
>
> You can manually select the availability option of container terminal or set the availability as automatic. Select the *Automatic Status* when creating a container terminal or depot to enable the automatic setting of the container terminal or depot availability.

Table 2

Colors	Parking Space	Container Terminal
Green	Available	Servicing Fine
Yellow	--	Servicing but Expect Delay
Red	Full	Servicing not Possible
Orange	Filling up Fast	--
Grey	--	Outside Work Hours

Click the respective icons on the map to view the details and availability status.

- **Overview of Active Incidents, Tour Completion, Communication with Truck Drivers/Business Partners**

  The right pane has different options to display the different communication messages. These messages are sorted according to time. The following are the type of messages:

Table 3

Message Type	Function
All	View all the incidents and received messages. You can interact only with an individual recipient. If there are multiple recipients in a group, you cannot interact with any of them. All the unread messages display in bold.
Hub Messages	View all messages from the logistic hub
Public Traffic Messages	View all messages from the traffic message channel
Messages from my Drivers	View all messages from the truck drivers and respond to them
All Order	View all the tour completion events as the truck completes a tour
Business Partner Messages	View and respond to messages from other business partners
Sent Messages	View all the messages and incidents that you sent.
Message Preferences	Filter messages based on priority and time. By default, all the hub and public traffic messages display.

You are provided with context specific actions. For business partner and driver messages, you can reply and a chat is initiated. You can copy the message in the chat. You can also accept or reject any invitations by other business partners to connect and collaborate. This pane also displays all the messages sent to trucks or business partners by users of a company. These messages are visible to all users of a company.

Business Value

- Promotes effective communication with the driver
- Effective tracking of the truck movements on the map
- Business value for various roles:
    - **Hub Manager**: Monitor traffic around the logistics hub, notify trucks and communicate with the carriers and parking operators
    - **Administrator at Carrier**: Monitor truck movements, tour completion, communicate with the truck drivers, and communicate with the Hub manager and other carriers, and parking operators
    - **Parking Space Operator**: Publish availability of parking spaces, communicate with the carriers and Hub manager

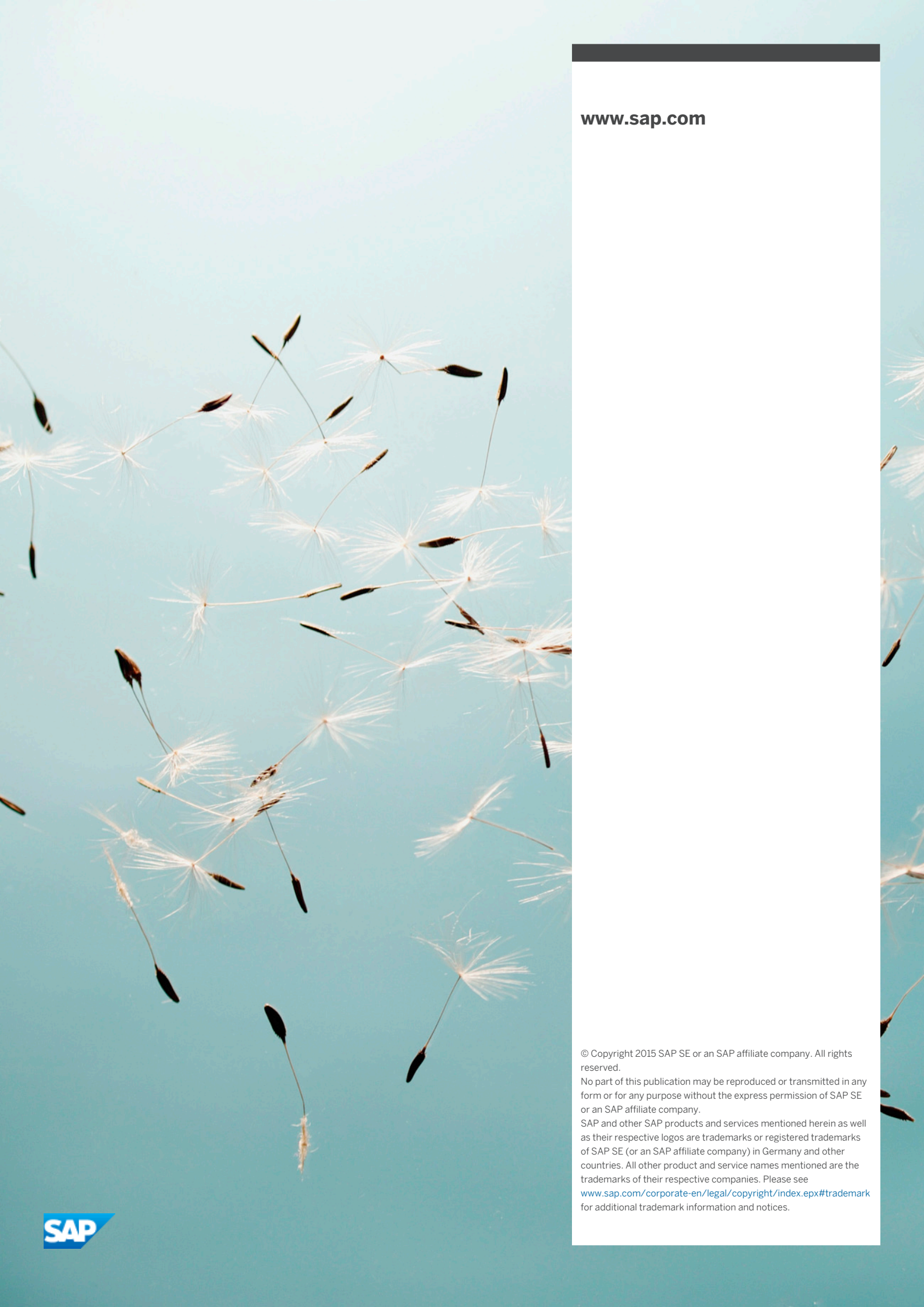
Related Information

- *SAP Networked Logistics Hub - Overview* [external document]
- *SAP Networked Logistics Hub - User Roles* [external document]
- *Register with SAP Networked Logistics Hub* [external document]
- *Launch Applications* [external document]

Typographic Conventions

Table 4

Example	Description
<Example>	Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, "Enter your **<User Name>**".
Example > *Example*	Arrows separating the parts of a navigation path, for example, menu options
Example	Emphasized words or expressions
Example	Words or characters that you enter in the system exactly as they appear in the documentation
www.sap.com	Textual cross-references to an internet address
/example	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
123456	Hyperlink to an SAP Note, for example, SAP Note 123456
Example	• Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options. • Cross-references to other documentation or published works
`Example`	• Output on the screen following a user action, for example, messages • Source code or syntax quoted directly from a program • File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools
`EXAMPLE`	Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, `SELECT` and `INCLUDE`
EXAMPLE	Keys on the keyboard



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