FAQ

International Versions of the AR System, Version 4.x

I. Basics

A. What does Remedy mean when it states that AR System is "internationalized" (or "I18n-enabled")? Why is that important to me?

When software is written, its developers often make assumptions about the people who will use the product, and the way in which they will use it. Since most commercial software originates in North America, it often contains assumptions about the *locale* in which the product will be used, including:

- the user's preferred language (English)
- flow of text (left-to-right)
- formats (mm/dd/yy for date, \$ for currency, 12-hour a.m./p.m. clock)
- sort order (single-letter A-Z)
- numeric separators (15,255.38)
- characters being entered, manipulated and output (one byte in length)

These assumptions are fine for most North American users, but when users in other regions take an interest in the product, some of the assumptions prove false, and may even prevent the product from running at all.

When Remedy states that AR System is internationalized, we mean several things:

- 1. We have carefully reviewed, modified and tested it to remove such assumptions from the code.
- 2. We have structured AR System to look for and use correct information about the user's locale, so that AR System behaves as, for instance, German users would expect German products to behave. So, instead of assuming that all users want to see mm/dd/yy dates, AR System asks the operating system (UNIX, Windows) on which it is running, "How do users in this locale like to read their dates?" and displays the dates in a way that makes sense to users in that locale.
- 3. Except for what the user sees on screen (which Remedy sometimes sells in a translated, *localized* edition), any given version of AR System is and runs the same all over the world.

This is important to you (and to us) because it allows you to implement AR System—within the boundaries outlined in this FAQ and in our product documentation—in a wide variety of countries, or locales, and be assured that AR System will behave the same way everywhere.

B. What are examples of the importance of internationalization?

As an example of the degree to which AR System has been internationalized, the worst assumption to make is that all of your customers will want to use your product in English. The only way to remove that assumption is to remove all of the on-screen text (the "strings") and help text, place them in separate resource files or message catalogs, then "point" to them from the code. That way, it will be easier for Remedy to create and maintain a version in French or Japanese which simply "plugs in" to the program code.

Another example of internationalization in AR System is that of character length. In English and other Western languages, each character (A, 1, x, *, é, ß) can be stored in a single byte. Asian and some other languages, however, contain so many thousands of different characters that more than one byte is required to define each character; these are called *multi-byte character sets (MBCS)*. Products which assume a one-to-one correspondence between bytes and characters will mishandle multi-byte characters, but such assumptions have been removed from the AR System so that it will handle multi-byte characters (for instance, Japanese) correctly.

C. What does Remedy mean when it states that AR System is "localized"? Why is that important to me?

Remedy's <u>localized products</u> are those whose user interface and documentation we have had translated into languages other than English. Sometimes we do this ourselves; sometimes we do it with the help of our partners outside North America.

This is important to you (and to us) because, when the user interface and documentation are in French or German or Japanese, your users in those locales will adopt Remedy's products sooner, use them more readily, and be more productive.

Since it is the same program code everywhere in the world, you do <u>not need a localized version</u> to use AR System outside of North America; however, your users' productivity can benefit greatly from the localized version, where available.

D. What exactly has been "localized" in a localized version of AR System?

Besides the documentation, Remedy translates all of the menus, dialog boxes, messages and help text *which occur in Remedy's base product* (see III. A below). We do not, of course, translate the text in forms which you have created for your own application.

This means that, if you run your own English-language application on a French version of AR System, your users will see a mixture of English and French. (See V. A below.)

II. Support

A. To what extent are Remedy's products internationalized?

Remedy currently groups its internationalization and support as follows:

English

- Japanese
- Western European ("Latin-1") languages: Danish, Dutch, Finnish, French, German, Italian, Norwegian, Portuguese, Spanish and Swedish
- Eastern European ("Latin-2") languages: Albanian, Croatian, Czech, Hungarian, Polish, Rumanian, Slovene
- Northern European ("Latin-4") languages: Estonian, Finnish, Greenlandic, Lappish, Latvian, Lithuanian

The following table lists the product components that support these languages. This does not mean that all of these components are localized; it means that you can build applications and enter, manipulate and output data in these languages *even when running an English version of the Remedy product a non-English-language environment (operating system and database).*

Component	English	Japanese	W.	E. and N.
			European	European
AR Server on	Yes	Yes	Yes	Yes
Windows NT				
AR Server on	Yes	Yes	Yes	Yes
Solaris				
AR Server on HP-	Yes	Yes	Yes	Yes
UX				
AR Server on IBM	Yes	No	Yes	Yes
AIX				
Win 95/98/NT	Yes	Yes	Yes	Yes
Clients				
Motif Client	Yes	No	Yes	No
AR Web 3.x	Yes	No	No	No
Remedy Web	Yes	Yes*	Yes*	Yes*
(Java)				
Macintosh Client	Yes	No	No	No

^{*}Consult Release Notes.

NOTE: Support for E. and N. European languages will be available in Q4.

B. Does AR System support Unicode?

Unicode simplifies the handling of characters in multi-platform, multi-language environments. It is not yet implemented in AR System.

III. Availability

A. Into which languages has Remedy localized its products?

<u>The list of localized Remedy products</u> is growing each year. The following table shows products in currently available languages (AR System 4.0.3):

Product Component	French	German	Japanese
Windows NT Server	Yes	Yes	Yes
Solaris Server	Yes	Yes	Yes
HP-UX Server	Yes	Yes	Yes
IBM AIX	Yes	Yes	Yes
WIN 95/98/NT User Tool	Yes	Yes	Yes
Windows Admin Tool	No	No	Yes
Motif User Tool	No	No	No
AR Web 3.x	No	No	No
Remedy Web (Java)	No	No	No

Remember that a localized version of AR System will run optimally when the operating system, database, etc. are also localized. (See below.)

B. Is there a localized version of the AR System in Chinese? Does Remedy support any of the various flavors of Chinese (Big 5, GB2312, etc.)?

AR System has not been *localized* into Chinese.

While AR System has been *internationalized* to support Japanese (which, like Chinese, uses multi-byte characters), additional testing is required to ensure support for Chinese character sets. We plan to announce progress on this soon.

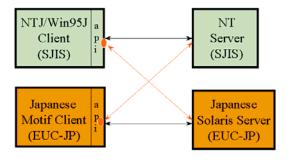
C. We have a license for AR System in English. Now that Remedy User is available in multiple languages, how can we obtain, for example, the French version of Remedy User for our users in Quebec?

You can download the installer for Remedy User in a variety of languages from http://www.remedy.com/download/ars/client.html

IV. Mixed environments (languages, platforms)

A. Some of our users in Japan work on Windows clients and others work on UNIX. Windows and UNIX encode and store characters differently. Do we need separate AR System servers for each set of users, or can we mix platforms?

AR System allows you to mix platforms by providing translation tables between UNIX and Windows. Thus, Japanese (or any language) versions of both clients can run against one server. These tables "translate" the character sets between the two operating systems, so that data entered on a UNIX client can later be properly viewed on a Windows client, and vice versa (see diagram).



Conversion happens in the API layer transparently

B. We have an AR System server in New York, and need to receive data from AR System clients in other countries. System performance is a high priority. What is the best way to work with clients in:

1. France (supported locale, single-byte character set)

You can install AR System server (French) in France to serve those users, with Remedy User (French) on their desktops. The Distributed Server Option (DSO) will keep the data on the servers synchronized. Data entered by the French users will appear correctly to users in New York, and text entered by the users in New York will appear correctly to French users; this is because these languages share a common character set supported by the operating systems of both languages. (There is, of course, no automatic translation of the data, so each set of users must be able to read the other's language.) Similarly, your database may be set for either French or English.

2. Japan (supported locale, double-byte character set)

You can install AR System server (Japanese) in Japan to serve those users, with Remedy User (Japanese) on their desktops. The Distributed Server Option (DSO) will keep the data on the servers synchronized. Text entered by the Japanese users will NOT appear correctly to users in New York, because the AR System server in New York is running on an English-language operating system, which will not display Japanese characters properly. However, data entered by the users in New York will appear correctly to Japanese users, because English-language characters are a subset of Japanese character sets and are supported by Japanese-language operating systems. (There is, of course, no automatic translation of the data, so each set of users must be able to read the other's language.) Your database must accommodate both character sets.

3. Russia (unsupported locale)

Since there is no Russian version of AR System, and the English-language version of AR System has not been tested for Cyrillic characters, you can install AR System server (English) in Russia to serve those users, with Remedy User (English) on their desktops. The Distributed Server Option (DSO) will keep the data on the servers synchronized. Text entered by the Russian users will NOT appear correctly to users in New York, because the AR System server in New York. is running on an English-language operating system, which will not display Cyrillic characters properly. Text entered by users in New York will appear correctly to Russian users, however, because English-language characters are a subset of Cyrillic character sets and are supported by Russian-language operating systems. (There is, of course, no automatic translation of the data, so each set of users must be able to read the other's language.) Your database must accommodate both character sets.

C. My company's headquarters is in the USA, and we have users in French-speaking Canada. I understand that there is a French version of AR System, which we would like to deploy for those users so that they do not have to work in English. What is involved?

1. If performance is a priority

If performance is a priority, and you expect traffic on the AR System to increase dramatically with the addition of the French version, you will be best served by purchasing a French version of the AR System with Distributed Server Option (DSO) in Canada, installing it on the local network with your users, and installing the French client (Remedy User, Remedy Notifier, etc.) on your users' computers. DSO will keep the data on your U.S. and Canadian servers synchronized.

2. If performance is not a priority

If performance is not a priority, and your goal is simply to replace the English user interface with French on your Canadian users' computers, you will be best served by obtaining the installer for Remedy User and installing it on those clients. See III. C above for details on downloading localized User Tools.

3. User Interface

Note that in both of these cases, you will affect <u>only</u> those portions of the user interface provided by Remedy products (AR System messages, Remedy User menus and dialog boxes). If the goal in this example is to replace <u>all</u> of the English user interface with French, other components (server OS, client OS, database, your own customized applications) must also be in French. See below.

D. Can I use other Remedy applications in English with localized versions of AR System 4.x?

Help Desk 4.0 has been tested successfully with French and German versions of AR System 4. The Action Center bundle combines these products.

E. How does the AR System know which language sorting routines, date format, character sets, etc. to apply?

The AR System takes its information on these settings from the operating system. It chooses the language sorting routines, etc., based on information from the locale settings chosen for the client. For example, if you have chosen German (for Germany) as the locale setting for your client, then the language sorting routines, date formats, etc. operate according to the rules for German (in Germany).

F. Can I run the Japanese version of the AR Server on an English operating system?

No. The Japanese version of the AR System depends on the Japanese version of the operating system for proper character handling and locale settings. (Your database will probably also need the Japanese version of the operating system for correct handling and settings.)

G. Can I run clients with the English-language User Tool against the Japanese version of the AR Server?

Yes.

If the client is running on an operating system set to Japanese locale, you can display, edit and store Japanese characters with it. If the client OS is not set to Japanese locale, you will only be able to display, edit and store English characters.

H. Can I enter W. European (i.e., German, French, Spanish) characters in the AR System with the locale and operating system set to English?

Yes, because both English and the W. European characters belong to the same character set ("Latin-1"). However, the locale-specific settings—language sorting routines, date formats, etc.—will be those of English rather than the W. European language since the locale is set to English.

V. Customized Applications

A. We have used AR System to create custom applications for our users in the USA and we would like our offices in France to begin using them. Naturally, we would like <u>all</u> of the user interface (onscreen text, error messages, menus, dialog boxes, online help) to appear in French. What is involved?

There are many variables in this equation, because the user interface comes from several different sources:

1. Operating system on the server

The operating system on the server (Windows NT, Solaris, HP-UX, AIX) must support the French character set. Although it is unlikely that your French users would see any messages from the server O/S, such messages would likely be in English.

2. Operating system on the clients

Your French users will likely run a French-language operating system on their client machines. Therefore, any messages, menus or dialog boxes from the local operating system will be in French.

3. AR System server

Your AR System server in the USA will properly handle, store and display the text entered by French users, because French and English share a common character set.

Even though the server is located in the USA, messages from the AR System server to the French users will be displayed in French, because the locale of the client is French. (N.B.: This feature will apply to all localized versions of the AR System beginning with next year's releases. French is the first version to implement this.)

4. Remedy User component of AR System

Menus, messages and dialog boxes which come from Remedy User—the AR System component installed locally—will be displayed in French, because Remedy User takes its information about locale from the operating system of the client.

5. Database

The database (SQL Server, Oracle, Sybase, etc.) must support the French character set. Although it is unlikely that your French users would see any messages from the database, such messages would likely be in English, since the locale for the database is US English.

6. Your custom application

Assuming that you developed your application in English for users in the USA, your French users will see all the same English-language forms and screens. You may choose to translate, or *localize*, your application.

B. How can we translate, or localize, our customized AR System application from English into French?

A common solution is to create two views (one English, one French) so that the same forms will be seen either in English or in French, depending on the locale of the user. For this, you translate the text in the second view into French.

VI. Licensing

A. If I download the localized versions of Remedy User and install them, do I need to purchase more licenses?

Remedy User ("User Tool") is free and no license is attached to it. The licenses are attached to AR Server. Purchasing more licenses for the Server will permit more of your users to work on the AR System. A user logging into AR System on a localized version of the client would need the same kind of fixed/floating licenses as would be required on an English version of the client. Therefore, if you have enough floating licenses available, you won't need to purchase anything.

VII. Pricing

A. What determines the price of a license?

The price of a license depends on the location of the AR Server to which the license is assigned, because support for the AR System is assigned geographically. So, a license for the English-language version of AR System installed in Paris will be the same as that of a French version of AR System installed in Paris, because both products will be supported by Remedy UK.

B. Our USA-based company wants to buy the German version of AR System, but it does not appear on Remedy's USA price list. How can we buy it?

AR System German appears on the International Full Price Lists. Localized products are not available on the Domestic Price List.

VIII. Compatibility

A. Where can I find the most recent Compatibility Matrices for localized versions of AR System 4.x?

http://www2.remedy.com/products/cmatrix/index.htm

More information is also available in the Release Notes that ship with every version of the AR System.

IX. WWW

A. We want to deploy a lighter client than Remedy User for our users in other countries. What are the options?

Remedy currently has two Web-product offerings:

1. ARWeb

This HTML-based client, in combination with a waserver, allows users to see AR System applications as Web pages. An internationalized version is scheduled for release in Q4; meanwhile, it should only be deployed in English-language locales.

2. Remedy Web

This Java client for the AR System runs in combination with a waserver to deliver AR System applications through a Java applet. It is internationalized for European locales and Japan.

X. Currencies

A. Does the AR System support the use of the Euro symbol?

Yes. We have a <u>statement of support for the Euro symbol</u>.

B. How does the AR System allow for multi-currency deployments and applications?

AR System itself is currency-neutral, in the same way that its code base is locale-neutral. It supports multi-currency applications built on top of it because it makes no assumptions about the kinds of currency being used or operated on.

XI. Localization kits

A. We have an opportunity to sell several thousand licenses of AR System to the state-owned telco in Utopia. This is a locale supported by AR System, but the telco also wants the UI of the AR System localized into Utopian, which Remedy will certainly never do. How can we take advantage of this opportunity?

Similar requests come up several times a year, usually from our in-country partner or reseller. We have developed a *localization kit* and accompanying program for the AR System, which makes it easier for partners to translate the user interface, online help and documentation into languages into which we would not otherwise localize.

The kit is cost-free, but Remedy charges for certification of the localized version. The costs to be covered are for the linguistic QA of the partner's work. For details, contact Core Marketing.

If you have a question that is not included in this FAQ, please send it to us for the next version.