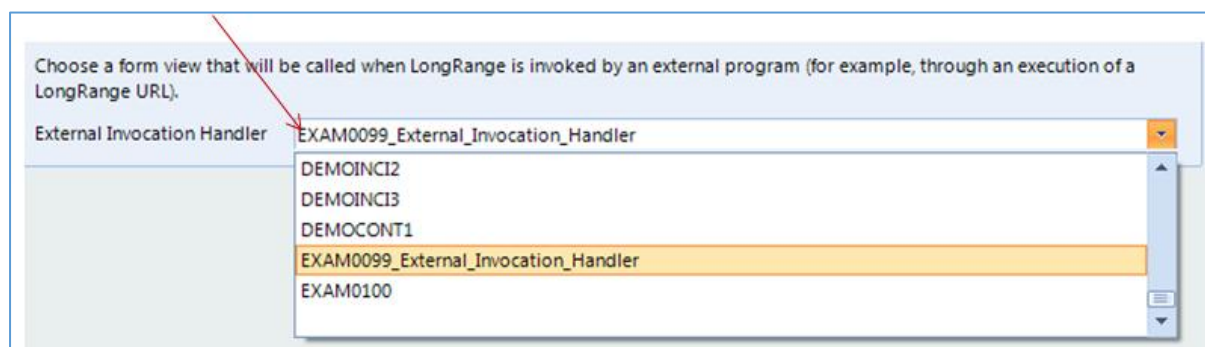


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[Activating LongRange from a URL](#)

In LongRange Studio you can now specify a form view as your 'External Invocation Handler':



Doing this means your LongRange application can be automatically ‘activated’ (ie: started up or awoken) from a URL that:

- Arrives in an email
- Arrives in an SMS
- Is on a web page

Once the External Invocation Handler is activated it can examine parameters on the URL and switch control to whatever form view should handle the request.

This means, for example, that you can send a user an email requesting they approve order 627273. When they touch the hyperlink in the email they are immediately shown the order 627273 and can touch a button to approve it. This type of processing is a foundation of ‘alert’ or ‘push’ driven business processes – where users are automatically ‘alerted’ to anomalies and ‘pushed’ to complete a business process.

See <http://www.longrangemobile.com/docs/LRProgRPG/index.htm#!Documents/activatinglongrangef.htm>

[Auto-Configuring LongRange from a URL](#)


You can now auto-configure LongRange servers from a URL received in an email, and SMS or accessed from a web page.

This reduces the probability of end users making configuration mistakes. See the guide for example of HTML page that an end user can use to install and configure LongRange on their device in 3 or 4 screen touches.

See <http://www.longrangemobile.com/docs/LRProgRPG/index.htm#!Documents/autoconfiguringlongr.htm>

[Demonstration Human Resources application - ‘Alert’ or ‘Push’ capabilities added](#)

You can use the new Configure option on the Human Resources menu to set up the alert/push demonstration:

 **Configure**

Parts of the Human Resources application are site configurable. Use this item to configure what your chosen email server is and which e-mail addresses service certain ‘roles’ in the Human Resources application.

This feature allows the Human resources application to start acting in an ‘alert’ or ‘push’ way. People are sent activation, event and contact e-mails when key events occur within the Human Resources application.

Use the “i” information icons on the configuration screen for more details about when these emails are sent.

This Configure form asks you to define an SMTP mail relay server to use and to specify the e-mail addresses of the people fill certain key ‘roles’ in the Human Resources and Incident demonstration systems:

Configure [Save Changes] [Send Test Emails]

SMTP Relay Server Details ⓘ

IP Address localhost
Port 25
Sender Host Id 10.2.0.181
SSL Application Id Optional. If you are using SSL enter your SSL certificate Application Id.
User Optional. The user that can access the SMTP mail server
Password Optional. The the user's password
E-Mail Sender mark.duignan@lansa.com.au
IP Version Use Internet Protocol Version 4 (IPV4)
Activate Demo Yes - Alert email logic is turned on.

Human Resources Management ⓘ

Budget Controller mark.duignan@lansa.com.au
Insurance Manager Optional. Enter an email address.
Contact Manager Optional. Enter an email address.

Incident Management ⓘ

General Manager Optional. Enter an email address.
Safety Officer Optional. Enter an email address.

Use the information icons ⓘ to see when and how alert/push notifications are sent to the people in these roles:

Configure [Save Changes] [Send Test Emails]

SMTP Relay Server Details ⓘ

IP Address Required. Use your IBM i server's IP address as a default.
Port Required. Normal values are 25 for normal and 465 for SSL
Sender Host Id Required. Email sending host identity. Use IBM i server's IP address...
SSL Application Id Optional. If you are using SSL enter your SSL certificate Application Id.
User Optional. The user that can access the SMTP mail server
Password Optional. The the user's password
E-Mail Sender Required. Sender email address - use the full name@domain.com for...
IP Version Use Internet Protocol Version 4 (IPV4)
Activate Demo Yes - Alert email logic is turned on.

Human Resources Management ⓘ

Incident Management ⓘ

Demonstrating 'Alert' or 'Push' Driven Business Processes

The e-mail addresses on these panels identify key roles in the demonstration Human Resources and Incident systems. The people in these key roles are sent 'alert' e-mails when certain business events are detected. If they have LongRange installed on their mobile devices they can touch the e-mail message and be taken directly to the relevant information.

This type of alert driven capability can be added to existing applications and often represents significant business value by expediting business processes often by changing them from pull (the person has to seek out the business event) to push (the person is told about the event and can action it immediately or be reminded to action it in the future).

How to Trigger Alert Messages

- Configure the SMTP relay server and verify it works by sending test messages.
- To Budget Controller -> Change an Employee to be a contractor.
- To Insurance Manager -> Change an employee's role.
- To Contact Manager -> Change an employee's phone number.
- To General Manager -> Change an incident's status to 'Closed - no action planned' or create a new incident.
- To Safety Officer -> Use the word 'snow' in an incident report.

From a business role perspective this demo feature activates these business scenarios:

Human Resources - The Budget Controller

The budget controller is sent a message when an employee is changed to be a contractor.

The business scenario is that this type of role change may have budgetary implications for any projects that the employee is currently involved in.

The budget controller would check out the precise details and review the project budgets accordingly.

Human Resources - The Insurance Manager

The insurance manager is sent a message when the role of an employee changes. The business scenario is that when an employee's role changes whether they need to be insured - or what the cost of their insurance should be - may need to be adjusted.

By doing the adjustments in the most timely manner premium costs can be minimized.

Human Resources - The Contact Manager

The contacts manager is sent a message when any phone number associated with an employee changes. The business scenario is that 'non-integrated' external organizations and hardware devices may have employee contact numbers recorded in them.

The contacts manager is also sent a "vcard" an e-mail containing an attachment that contains the complete employee contact details. This may be used to update the contacts on a device or passed on to others.

By notifying 'non-integrated' organizations and devices of employee contact changes the smooth running of the business and the satisfaction levels of customers may be improved.

Incidents - The General Manager

The general manager gets notified every time an incident is updated to have status 'Closed - no action planned'. This is because only the general manager can sign off on an incident being closed with no further action taken.

The general manager is also sent two e-mails whenever a new incident is created. These emails prompt the manager to create reminders for 7 and 14 day incident progress reviews in his or her diary or calendar.

Incidents - The Safety Officer

There have been a spate of snow and ice related slips and falls. They are costing the company time and money and cause pain and suffering for those injured. This problem is made worse because the maintenance crews have been slow to remove the slip and fall hazards.

The safety officer is sent an alert whenever an incident containing the word 'snow' appears in the incident system.

Starting up from a URL

There is a new example to demonstrate sending emails or SMS messages that contain URLs that activate parts of the shipped LongRange demonstration.

On the Programming Examples -> Use Case examples menu:

**Starting Up from a URL**

You can start LongRange Apps running from a URL and pass parameters from the URL into the App. This means you can send e-mails or messages that start an App running and instruct it to do something automatically. This is the foundation for creating 'alert driven' business processes. For example - rather than running the low stock report every morning the user gets an email that says 'Product 747464 has low stock. Touch here to reorder it' in real time. The user is actively 'pushed' in real time to reorder stock rather than having to 'pull' the information themselves by running a daily report.

The email option can send a test mail like this to your mobile device:

From program EXAM0098 - "Starting Up from a URL".

28 June 2013 1:28 PM

Here are three mocked up business processes you can initiate from this email.

(1) It is time to complete the bi-weekly check for snow related HR incidents. [Touch here to check for snow incidents.](#)

(2) The role of Sang Morales has changed. This may mean he no longer needs to be insured by us. [Please check here](#)

(3) [Your timesheet has not been received yet.](#)

Here is a more technical URL that will route through program EXAM0099 (the External Invocation Handler for the LongRangeDemo schema) and then into program EXAM0100 - which demonstrates how to access the URL details in an RPG form view program - [Start LongRange](#)

The SMS options can send individual test SMS texts containing LongRange URLs to test devices.

By touching the links in the email you can activate LongRange on your device and cause it to search for incidents containing "SNOW" or display the details of an employee.

Server Side Emailing (RPG)

A foundation of the alert/push driven business model are emails automatically generated by servers.

IBM I servers have a built-in SMTP mail server- but traditionally it has been hard to access from RPG code.

LongRange-RPG now includes an interface that allows RPG programs to send mails via any accessible SMTP mail relay server – including the native IBM i one, MS-Exchange on a network, Gmail or an ISP's email service.

On the Programming Examples -> Use Case examples menu:

**Server Side Emailing**

You can easily send e-mails from your RPG programs. Do to this you need access to an SMTP email relay server. Your IBM i has one built in - or if you use MS-Exchange on your network you can use that to relay your emails. Many e-mail service providers such as Gmail also provide SMTP replay services. Make sure you check their terms of usage.

Sending iCalendar Details via Email

Being able to send automatically generated calendar requests (diary entries) and reminders to users, customers, sales staff, etc is an increasingly important part of modern alert or push driven business applications.

The RPG and LANSa version both include examples of sending calendar events by email.

In LongRange-RPG an EZI procedure (EZI_MailVCard) has been introduced to make this a simpler task from RPG code. On the Programming Examples -> Use Case Examples menu:

E-Mailing Calendar Events

Your "EZI" layer provides various e-mailing services to help you build applications. One of the services allows calendar event or reminder entries to be sent to people from your server side RPG programs.

Also see <http://en.wikipedia.org/wiki/ICalendar>

[Sending Contact \(Vcard\) Details via Email](#)

Being able to exchange automatically generated contact details between users, customers, sales staff, etc is an increasingly important part of modern business applications.

The RPG and LANSAs version both includes examples of contact (vcard) exchange by email.

In LongRange-RPG an EZI procedure (EZI_MailEvent) has been introduced to make this a simpler task from RPG code. On the Programming Examples -> Use Case Examples menu:

E-Mailing Contact Details


Your "EZI" layer provides various e-mailing services to help you build applications. One of the services allows contact details to be sent to people from your server side RPG programs.

Also see <http://en.wikipedia.org/wiki/VCard>


["EZI" Quick Panels \(RPG only\)](#)

The "EZI" layer was first introduced in RV12. It has been expanded to include an EZI Quick Panel that allows basic panels to be quickly formatted in RPG programs.

On the Programming Examples -> Introductory Examples menu:

 **EZI QPanels 1**

EZI Quick Panels provide a quick and standardized way to layout form views. This example demonstrates the basics of using your EZI layer functions to create QPanels (Quick Panels).

 **EZI QPanels 2**

Once you understand the basics of EZI QPanels it is easy to start to get more elaborate – including multiple panels, input fields and panels that change how they appear on small screen devices.

'EZI QPanels 2' demonstrates four EZI Quick panels named P1, P2, P3 and P4 arranged on a form:

The screenshot shows an iPad interface for 'EZI QPanels 2'. The top status bar indicates 'iPad', signal strength, '11:22 AM', and '48%' battery. The app title 'EZI QPanels 2' is centered, with a 'Submit' button and a share icon on the right.

Order Details (P1) (with an information icon):

- Order Number:** 56373-88373N (touchable)
- Customer Address:** ACME, Smith and Buchanon and Sons Engineering and Manufacturing (touchable).
- Ship Order To:** 121 Smith Street Via Sometown Into SomePlace

Address Details (P2) (with an information icon):

Name	Joe Bloggs & Associates
Address	156 Lower Smith Street
City or Town	New York
Zip Code	819287
Phone Number	(614) 6373-373737
Email Address	joe@Bloggs.associates.com

Other Terms and Conditions (P4) (with an information icon):

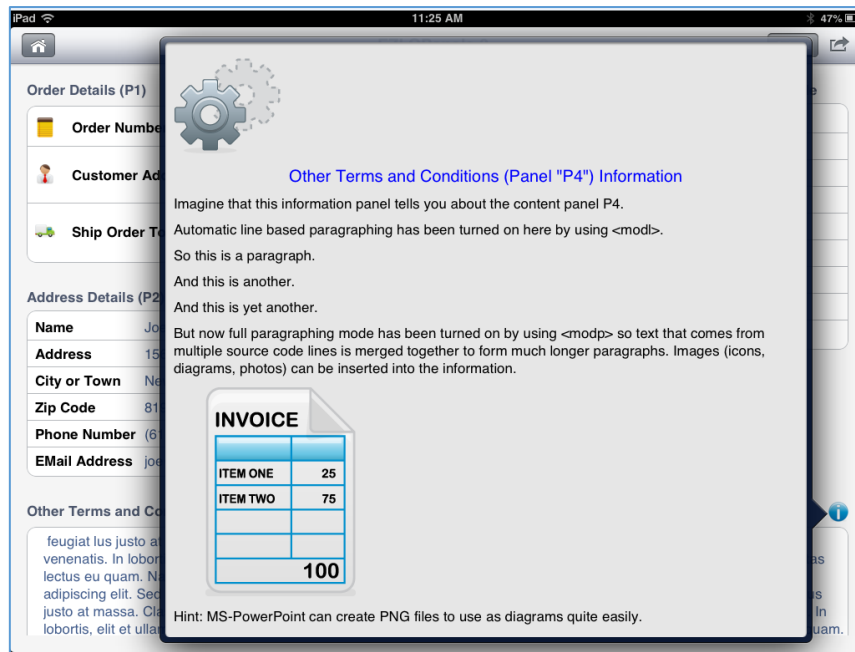
feugiat lus justo at massa. Class aptent taciti socio ad litora torquent per conubia nostra, per inceptos hymenaeos. Sed venenatis. In lobortis, elit et ullamcorper hendrerit, metus ante tristique odio, vel posuere dui ligula eget ipsum. Nulla egestas lectus eu quam. Nam volutpat. Quisque malesuada. Suspendisse vel dui non Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed risus. Ut nibh. Maecenas ultricies, ligula et ullamcorper tincidunt, mi dolor porttitor turpis, eu feugiat tellus justo at massa. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Sed venenatis. In lobortis, elit et ullamcorper hendrerit, metus ante tristique odio, vel posuere dui ligula eget ipsum. Nulla egestas lectus eu quam. Nam volutpat. Quisque malesuada. Suspendisse vel dui non Sed risus. Ut nibh. Maecenas ultricies, ligula et ullamcorper tincidunt, mi dolor porttitor turpis, eu feugiat tellus justo at massa. Class aptent taciti sociosqu

Credit (P3) - note Zip Code -> Can Sign for are editable (with an information icon):

Name	Mary Bloggs & Associates
Address	176 Lower Smith Street
City or Town	Seattle
Zip Code	819748
Phone Number	(613)6373-373737
Email Address	mary@Bloggs.associat...
Credit Limit	\$64,000
Funds Available	\$62,000
Can sign for?	Check/Cheque

The panels flex and change with the device orientation and on small screen devices are arranged under one another instead of side by side. Input fields, drop downs and touchable fields are also demonstrated.

EZI Panels can also automatically present more information (aka: help text) when the user touches the information icon. The text is dynamically read from native IBM I source file members - so it easy to create, test, maintain and deploy using standard IBM facilities.....



"EZI" State Variables (RPG only)

The "EZI" layer was first introduced in RV12. It has been expanded to include a set of procedures that allow RPG programs to permanently remember structured 'state' values (ie: to persistent name-value pairs).

The new procedures are named:

EZI_UsingStateOwner	Set the owner (or container) of the current state data set
EZI_UsingStateObject	Set the object within the current state set
EZI_SaveStateVar	Save the value of a state variable
EZI_SaveNumericStateVar	Save the value of a numeric state variable
EZI_GetStateVar	Get the value of a state variable
EZI_GetNumericStateVar	Get the value of a numeric state variable
EZI_DeleteStateVar s	Delete one or more state variables

If you wanted to associate details with the current user (stored in variable IBMiUserProfile say) and save them you might write code like this:

```
// Imagine variable IBMiUserProfile contains the current user profile
IBMiUserProfile = 'FRED';
// First we give this 'set' of user related information a name ...
EZI_UsingStateOwner('USER_INFORMATION');
// within the set 'USER_INFORMATION we' are interested in the 'thing'
// named 'USER_XXXXXXX' where XXXXXXXX identifies the current user ...
EZI_UsingStateObject('USER_' + IBMiUserProfile);
// Save some details
EZI_SaveStateVar('Name'      : 'Fred');
EZI_SaveStateVar('EMail'    : 'Fred.Bloggs@company.com');
EZI_SaveStateVar('Printers' : 'PRT1'      : 1); // 'Printers' is a list
EZI_SaveStateVar('Printers' : 'QPRINTER' : 2);
EZI_SaveStateVar('Printers' : 'PRT_17'   : 3);
EZI_SaveNumericStateVar('PrinterCount' : 3);
```

Getting these details back later, or into some other program, is done like this

```

IBMUserProfile = 'FRED'; // Say
EZI_UsingStateOwner('USER_INFORMATION');
EZI_UsingStateObject('USER_' + IBMUserProfile);

TheUserName      = EZI_GetStateVar('Name');
TheEmailAddress  = EZI_GetStateVar('Email');

PCount = EZI_GetNumericStateVar('PrinterCount');

For Instance = 1 to PCount;
    ThePrinterName = EZI_GetStateVar('Printers' : Instance);
EndFor;

```

The get procedures also support a default value – so you do not have to code for the 'not found':

```

TheUserName      = EZI_GetStateVar('Name' : 1 : 'Name is not available. ');
TheEmailAddress  = EZI_GetStateVar('Email' : 1 : '*NONE');

```

The delete function handles a variable number of keys ...

```

// Delete all state variables
DeleteCount = EZI_DeleteStateVars();

// Delete everything in the 'USER_INFORMATION' set
DeleteCount = EZI_DeleteStateVars('USER_INFORMATION');

// Delete everything in USERINFORMATION related to user 'FRED'
DeleteCount = EZI_DeleteStateVars('USER_INFORMATION ':'USER_FRED');

// Delete just Fred's email details
DeleteCount = EZI_DeleteStateVars('USER_INFORMATION ':'USER_FRED':'Email');

// Delete just Fred's second printer
DeleteCount = EZI_DeleteStateVars('USER_INFORMATION ':'USER_FRED':'Printers':2);

```

In using these procedures a grid like this can be useful for design and documentation purposes.

Here are some examples of structures you could invent using state variables:

Set Name	Object Name	State Variable Name
USER_INFORMATION	USER_<user profile>	Name
		Email
		Printers (list of 20 max)
		PrinterCount
		CurrentOrder
		CurrentCustomer
DEVICE_INFORMATION	DEVICE_<device GUID>	AssignedDeviceName
		AssignedDeviceGUID
		DateTimeFirstUsed
		RestrictedAccess
		RequiresAuthentication
	REGISTEREDUSER_<user profile>	RegisteredDeviceUserName
		LastUsedDateTime

		PreferredPrinter
		CanAccessAccounts
CORPORATE_INFO	MAIL_SERVER_INFO	ServerCount
		IP Addresses (list of 10 max)
		Ports (list of 10 max)
	COMPANY_<Company Number>	GenericSenderName
		GenericReplyAddress
		GeneralManagerEMail

Like all the EZI procedures the DDS and RPG source code is provided for you to own and use as you see fit. It is shipped in the LRNG_PROJ library's QDDSSRC, QCLSRC and QRPGLSRC files.

Note: State values are stored in data base table EZIPERSIST in your copy of the shipped LRNG_PROJ library. You can modify this as you like. You need to back up your state variables.

HTML formatted EMails

The RunOperation SendMail prepares emails to be sent from the client device.

It has a new parameter that allows you to format the email body as a HTML document.

<http://www.longrangemobile.com/docs/LRProgRPG/index.htm#!Documents/sendmail.htm>

Note: The ability of different e-mail clients to display and process HTML varies.

BarCode Scanning and Magnetic Stripe Reading

The barcode scanner element has a new 'ValueSource' property that indicates the source of the received value (BUILTIN, MANUAL etc) – refer to online documentation.

The Linea Pro interface now supports magnetic card stripe reading.

JavaScript API Enhancements

LongRange can be programmed in RPG, COBOL, CL and RDMLX (LANSA).

It can also be programmed using JavaScript.

The LongRange JavaScript API (named LONGRANGE) allows any JavaScript from any vendor to programmatically:

- Send files from the local file system to a server system
- Get from files from a server and save them to the local file system.
- Read, write, copy and delete files on the local file system.
- Read bar codes via the camera
- Record photos and videos to the local file system.
- Record audio tracks to the local file system.
- Perform SQL data base operations against a local SQL data base.

The LongRange-API capability has been expanded in RV14.

If you are using the JavaScript API contact your product vendor for the latest copy of this guide:

Programming LongRange with JavaScript

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Corrections



The disable property now works correctly in Android.

An issue with the Linea Pro interface honouring the barcode type restrictions specified in the BarcodeTypes property has been corrected.

OpenURL operations involving URLs containing non-ASCII characters now function correctly.

The dynamic use of the 'Multiline' TextBox property now function elements correctly in iOS.

Upgrading to RV14

Component to Upgrade	Get the Upgrade Material from Here
Android Client	https://play.google.com/store/apps/details?id=com.lansa.longrange
iPad, iPhone and iPad Client	https://itunes.apple.com/app/longrange/id508286590?mt=8
LongRange Studio	RPG - http://www.longrangemobile.com/upgrade.htm LANSA - http://www.lansa.com/products/longrange/downloadstudio.htm
LongRange Server Package for RPG	http://www.longrangemobile.com/upgrade.htm Use the  option. Open the zip file and read the installation instructions.
LongRange Server Package for LANSA	http://www.lansa.com.au/products/longrange/download.htm Use the  option

If you have any issues use your regional support <http://www.longrangemobile.com/support.htm>

or ask on the user forum <http://longrange.lansa.com.au/>