



Continuous Auditing

A Practical Perspective

AUDIT and ADVISORY

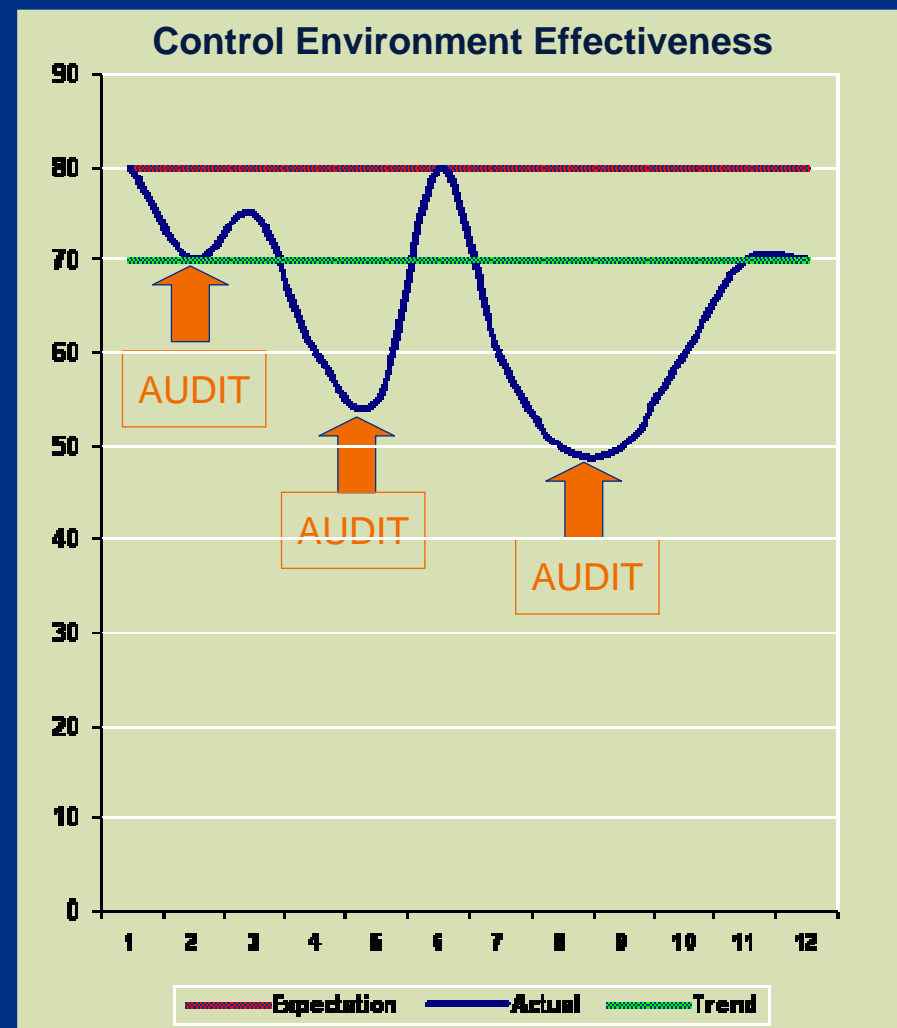
Kevin Handscombe
Senior Manager
London

Continuous Audit

The theory

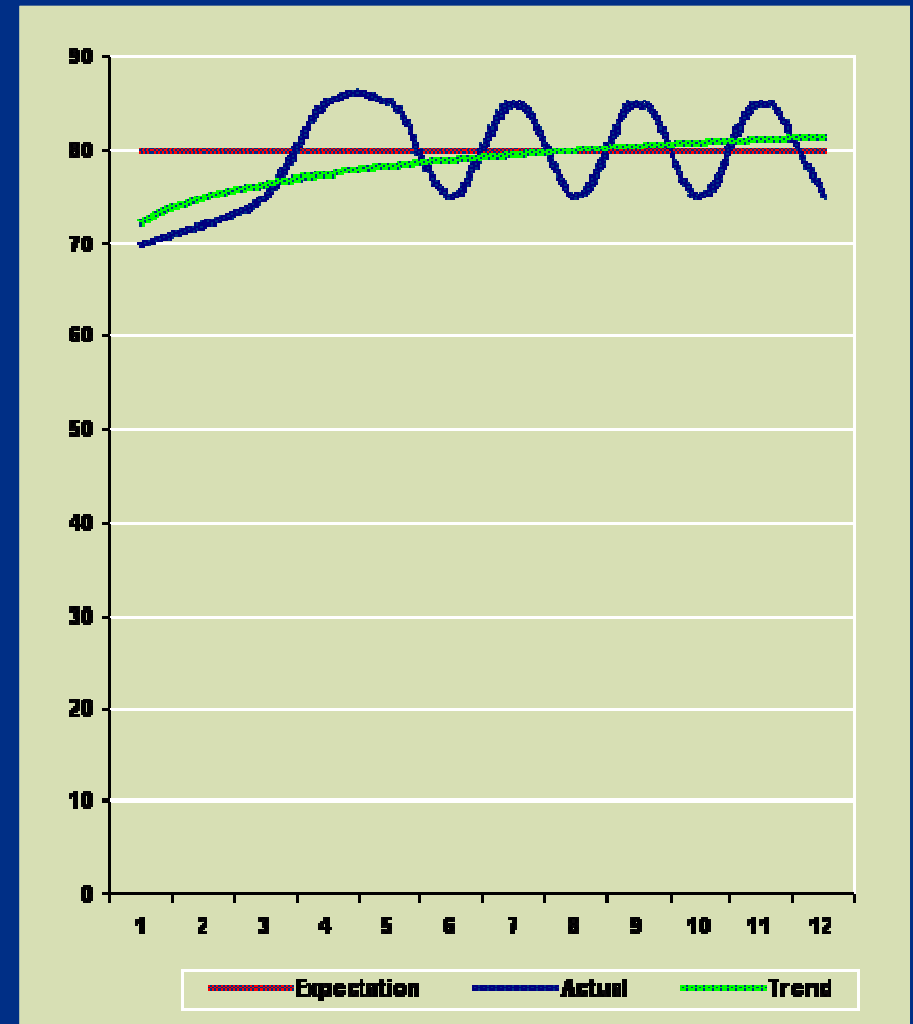
Conventional (periodic) audit

- Testing is periodic
- Control effectiveness improves after audit visit and recommendations are actioned
- Effectiveness declines between visits
- Overall trend is below expectation



Continuous audit – for contrast

- Testing is continuous
- Control failure detected and fixed almost immediately
- Effectiveness maintained
- Overall trend is upward



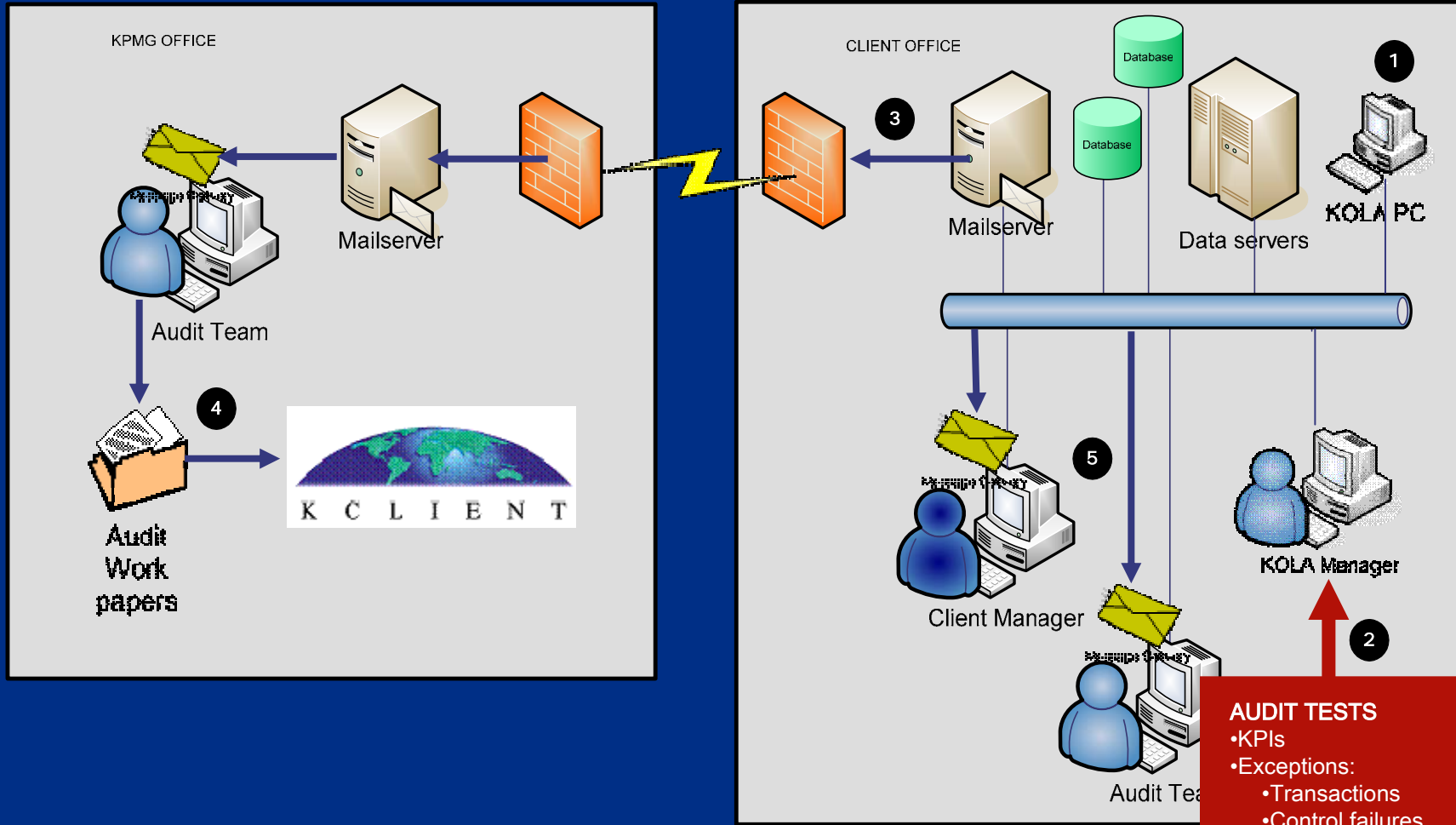
Practical application

The model adopted

The model adopted

- KOLA : KPMG On Line Audit
- Continuous on-line audit approach
- Technology tool providing real-time monitoring of client systems
- Automation is required to contain costs
- Much more than data analysis (ACL, Idea etc) which is point-in-time and backward-looking
- Monitoring for control failures, producing exception reports, calculating regular KPIs

KOLA Audit model

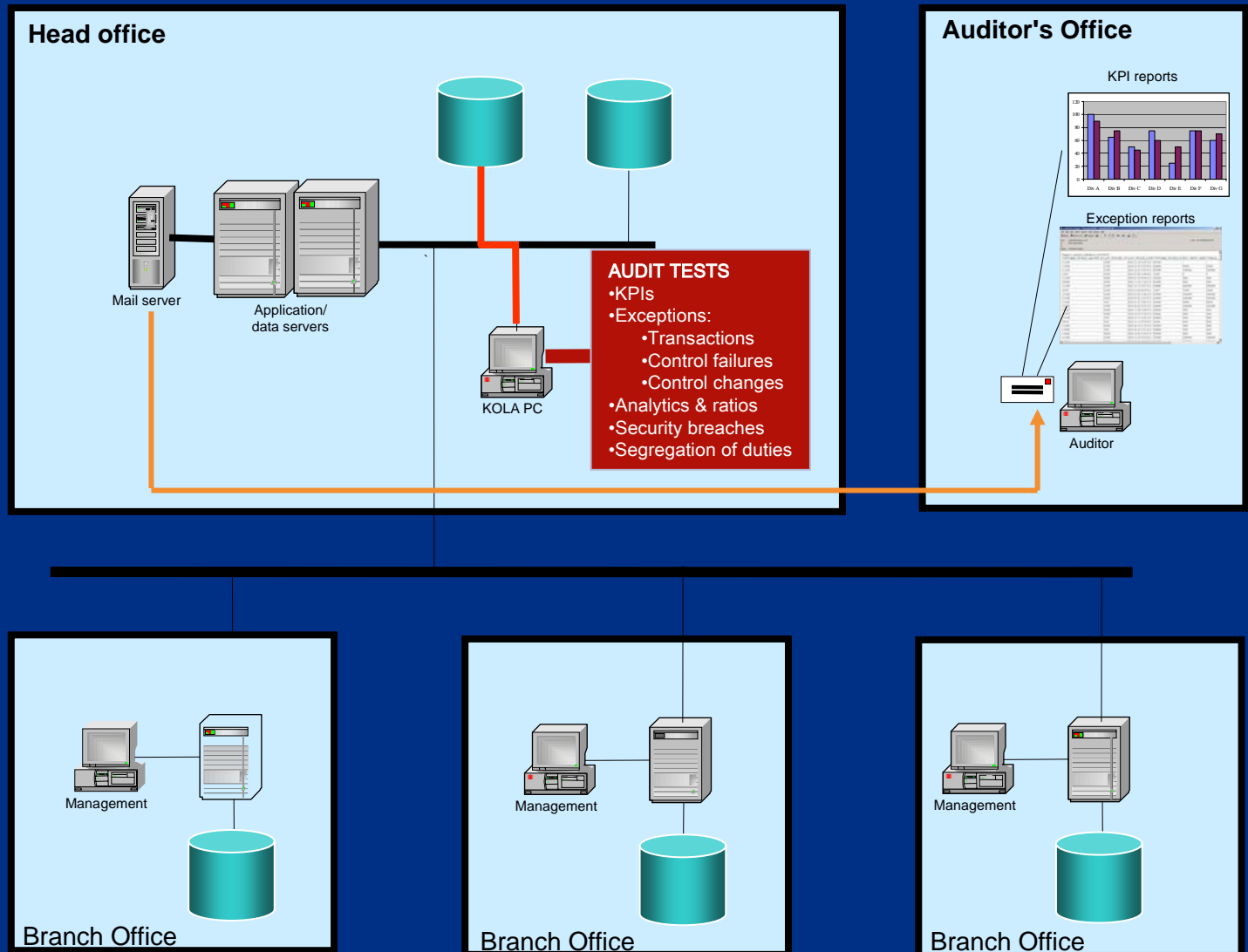


- AUDIT TESTS**
- KPIs
 - Exceptions:
 - Transactions
 - Control failures
 - Control changes
 - Analytics & ratios
 - Security breaches
 - Segregation of duties

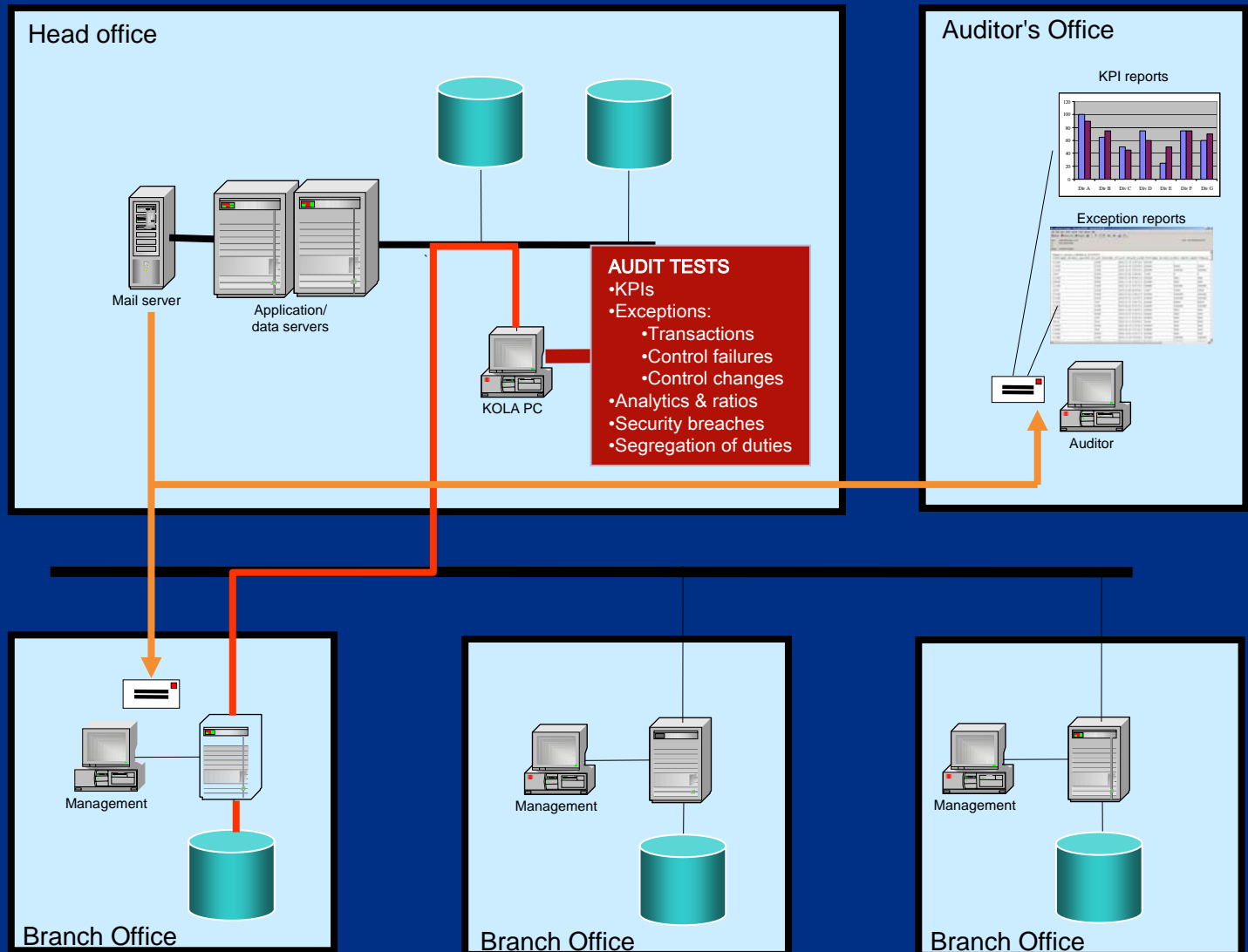
Explanation of the model

- ① Auditor's server is connected to the client network – no software is loaded onto the client system, instead KOLA is pre-installed onto a PC which remains at the company premises in a secure location. Data stays on the client system – this eases management concerns over loss of or damage to data.
- ② Direct connection to the data allows the extraction of predefined 'audit events', which are defined by the auditor. These can include exceptions, samples, system changes and control failures. The built-in scheduler allows reporting to either occur on a predetermined periodic basis (e.g. to calculate Key Performance Indicators) or as changes happen in the data.
- ③ When a database change occurs which creates an exception event, KOLA notifies the audit team with the results by email. Different members of the team can receive personalised emails, depending on materiality.
- ④ The team members can include these results in their workpapers, following up exceptions as they occur.
- ⑤ Email distribution also means that client management can be copied in with the email, to give them early warning of issues.

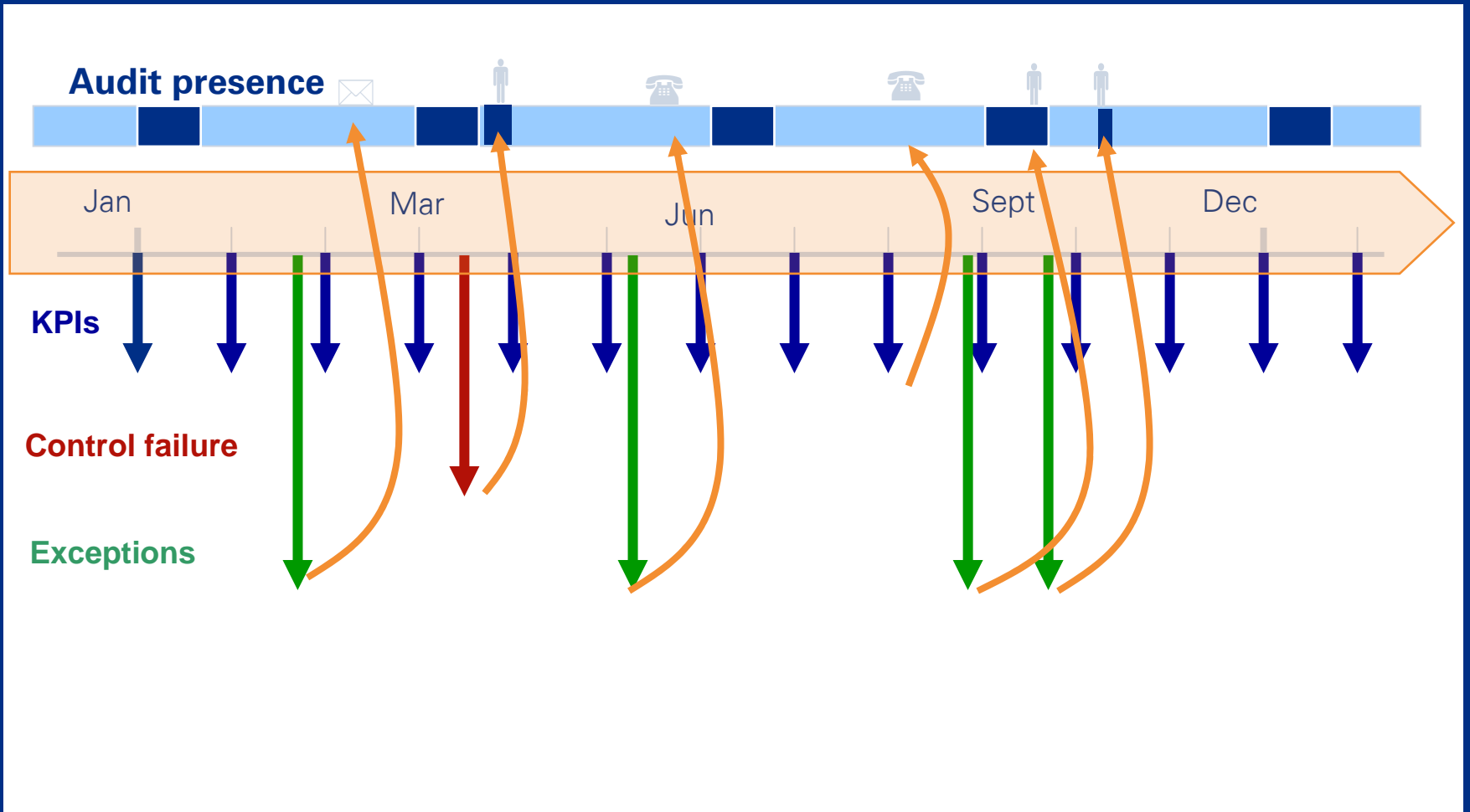
KOLA – central systems/data centres



KOLA - remote audit model



Effect on audit work



Example audit tests

Key Performance Indicators	<ul style="list-style-type: none">● Monthly extraction of general ledger balance and TB● Stock wastage comparison by depot● Calculated ratios
Exception reporting	<ul style="list-style-type: none">● Credit limit breaches● Branch banking variations● Large, round sum or out of hours adjusting journals
Standing data monitoring	<ul style="list-style-type: none">● Changes to standard cost or standard price masterfiles● Accounts payable standing data changes – bank details● Systems setting changes – controls disabled, credit limit changes
Security monitoring	<ul style="list-style-type: none">● Out of hours logins, login failures● Segregation of duties failures● Unusual changes to access rights, new super users created

Example email reports

Insured credit limit breaches - Message (HTML) - Unicode (UTF-8)

From: ad408zmg [mailto:ad408zmg@...co.uk] Sent: Mon 29/12/2003 06:00
 To: Anderson, Gareth; Eason, Luke; Handscombe, Kevin; ann.williams@...co.uk
 Subject: Insured credit limit breaches


Insured credit limit breaches for last week:

Code	Name	Balance	Cr limit	Insured cr limit
141615	Customer A	120770.0	100000	100000
820001	Customer B	103662.77	50000	50000
146358	Customer C	810585.1	750000	750000
882593	Customer D	64300.92	60000	60000
592400	Customer E	245631.2	80000	80000
773751	Customer F	110440.0	100000	100000

 This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager.
 This footnote also confirms that this email message has been swept by MIMESweeper for the presence of computer viruses.
 www.mimesweeper.com

Simple email exception report – customers breaching credit limits


From: Handscombe, Kevin Sent: Thu 25/11/2004 09:55
 To: Handscombe, Kevin
 Cc:
 Subject: Vendor MF change tolerances as at 25-11-04

 **Example Client PLC : Accounts Payable**

Vendor masterfile changes

Urgent! The following vendor records have changed and the invoice check tolerance has been changed, please investigate any that are not 0 and report the reasons to Mr Smith on extension 8788

Acc no	Vendor name	Interest calc	Posting block	Payment block	Duplicate flag	Inv check tolerance
2AM0088	XXXXXXXXXX				X	1000.0
2AU0062	XXXXXXXXXX			A	X	2000.0
2GA0005	XXXXXXXXXX	X		R	X	100.0
6XCWSSCHIA	XXXXXXXXXX				X	100.0



Formatted email standing data monitor – changes to control settings

Benefits

For clients

- No need to download data
- Automated exception report production
- Focus on key issues
- Deal with issues when they are fresh
- Demonstrate good governance
- Raise profile of internal audit
- Automate testing for Sarbanes-Oxley

For auditors

- Differentiator
- Automate time consuming tests
- We react when controls stop working
- Spread workload over the year
- Greater depth of audit for the same cost
- Proactive approach to solve problems as they occur



The technology tool

Selected screenshots

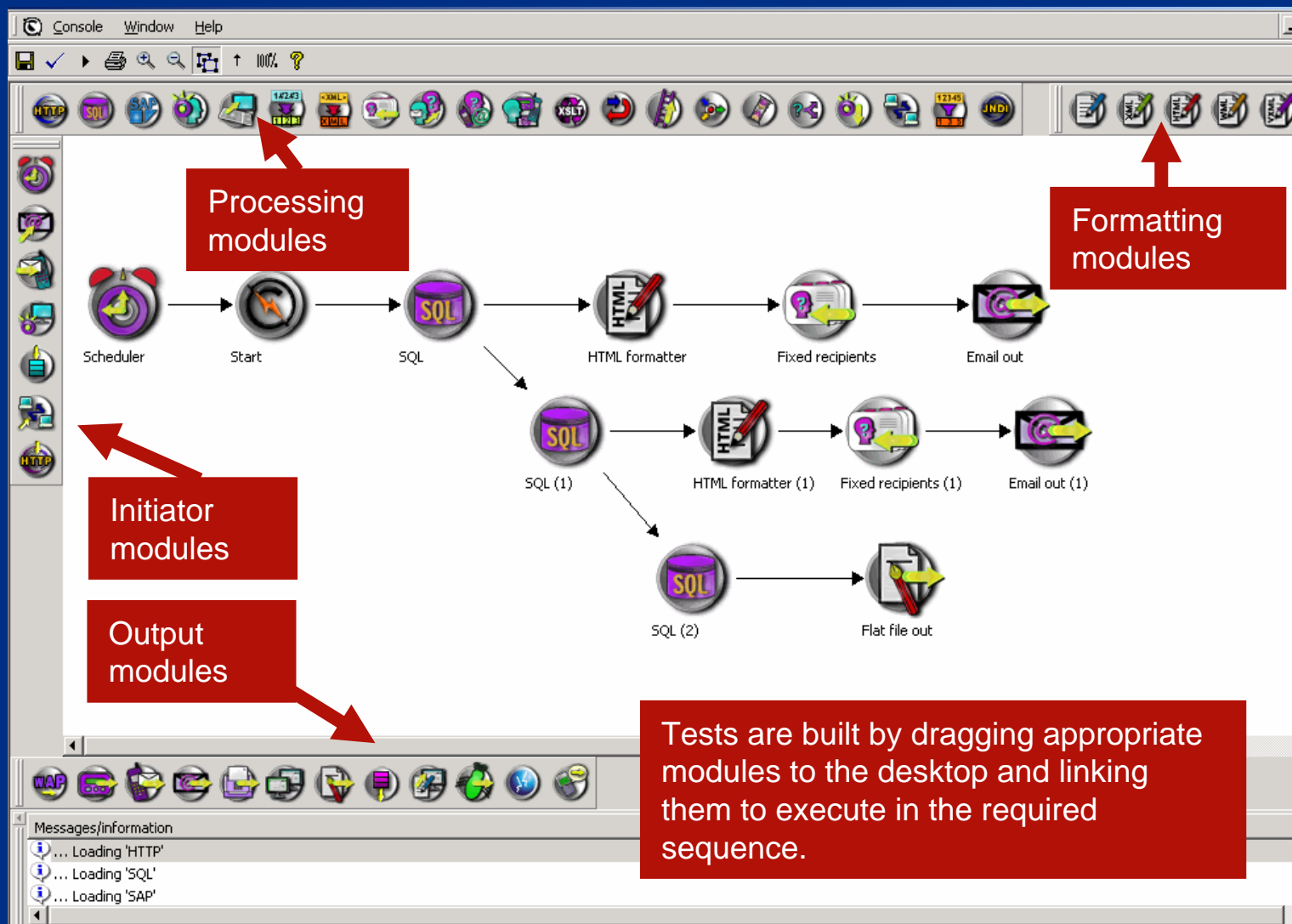
Audit test management

Alert name	Status	Description
Potential stock outs	Hold	Daily report of sales orders likely to cause a stock out
Slow moving stock - sell by	Hold	Monthly report of stock with <30 days to sell by date
Slow moving stock - sales history	Hold	Monthly report of stock lines in excess of one year's sales
Stock turnover KPI	Hold	Monthly report of stock turnover by branch
Stock outs	Hold	Monthly summary report of unfulfilled orders by branch
PI count differences	Hold	Monthly summary report of adjustments from PI counts by depot
Shrinkage summary	Active	Monthly report of shrinkage by depot

Library list of all available tests. Library tests can be customised and added to.

Audit test folders reflect audit file

Intuitive GUI interface



Scheduler

Scheduling

Properties | Days not to run | Time zone

Schedule

Weekly

Daily

Weekly

Monthly

Single event

12/01/2004

Interval (weeks)

1

Days of week

Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

End

31/12/2200

Schedule to run immediately

Time

Single

04:00:00

Repeating

Start

00:00:00

Interval

1

Unit

Minutes

End

23:59:59

OK Cancel Apply Help

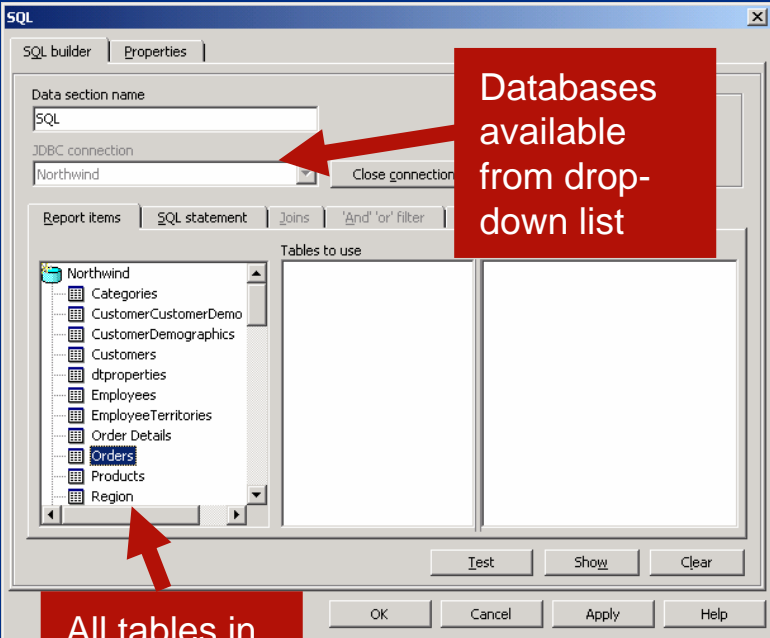
Options of single, daily, weekly, monthly to run test

Options for time of day to run – can be set to when system usage is low, usually early hours of the morning



The **Scheduler** module determines when and how often the test will run – “fire & forget”

SQL: On-screen schematic



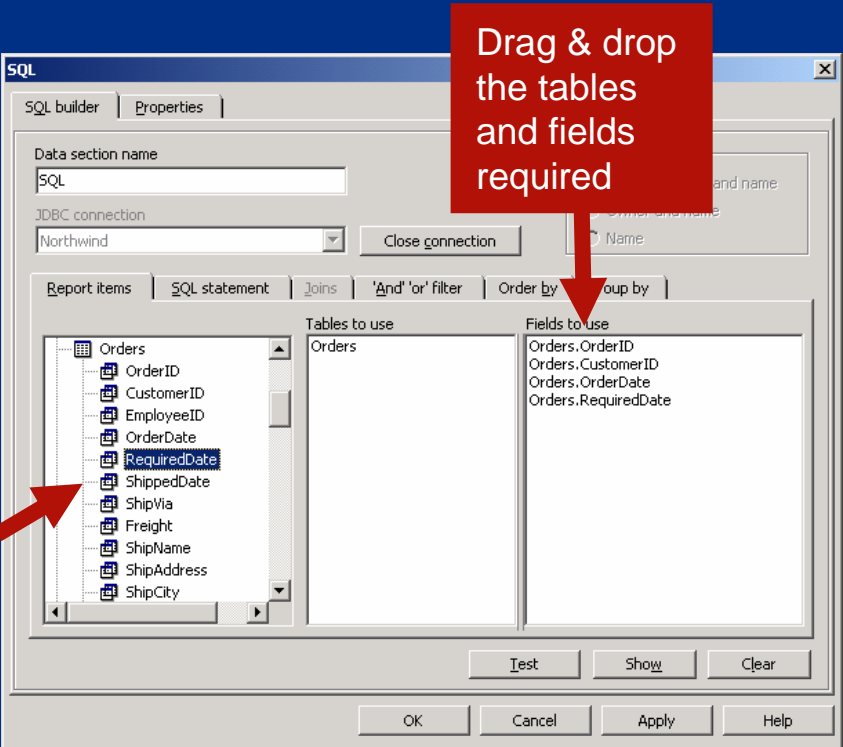
Databases available from drop-down list

All tables in the database listed

All fields in the tables listed

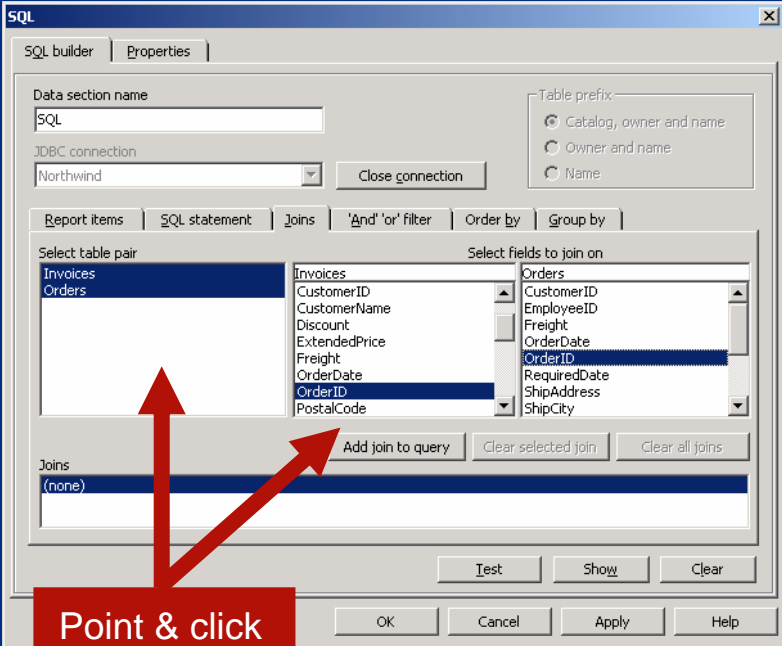


The **SQL** module provides an intuitive interface for non-specialists to build test selections

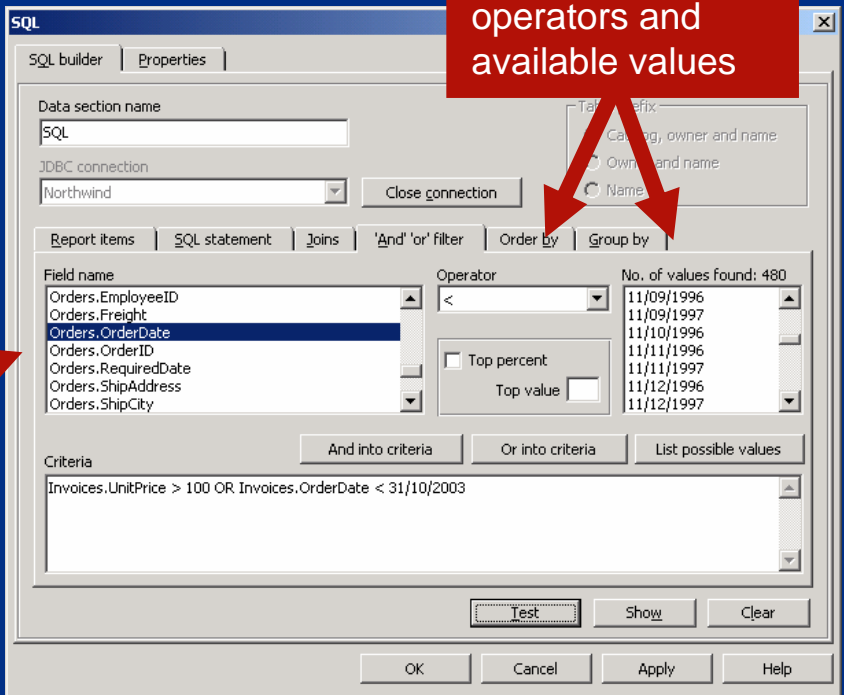


Drag & drop the tables and fields required

SQL: Point & click selection



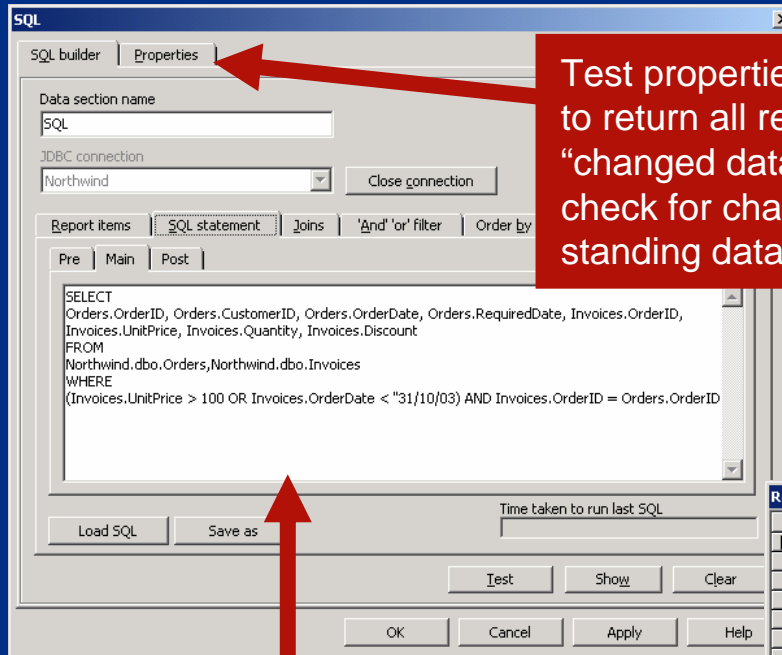
Point & click table joins



Point & click selection of operators and available values

Point & click selection criteria with and/or inclusion of fields

SQL: Output



Test properties can be set to return all results or "changed data only" – to check for changes to standing data

Click Test to preview the results

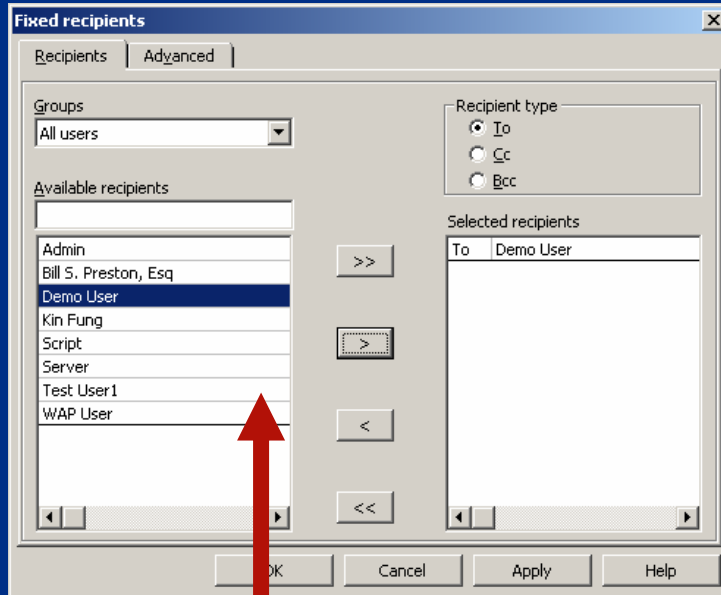
Point & click selections are captured into an SQL statement. Power users can write the SQL directly into the tab



Results - 46 rows

	OrderID	CustomerID	OrderDate	RequiredDate	t1.OrderID	UnitPrice	Quantity	Discount
	10329	SPLIR	15/10/1996	26/11/1996	10329	210.8	20	0000007450581E-02
	10351	ERNESH	11/11/1996	09/12/1996	10351	210.8	20	0000007450581E-02
	10353	PICCO	13/11/1996	11/12/1996	10353	210.8	50	0.200000002980232
	10360	BLONP	22/11/1996	20/12/1996	10360	210.8	10	0
	10372	QUEEN	04/12/1996	01/01/1997	10372	210.8	40	0.25
	10417	SIMOB	16/01/1997	13/02/1997	10417	210.8	50	0
	10424	MEREP	23/01/1997	20/02/1997	10424	210.8	49	0.200000002980232
	10479	RATTIC	19/03/1997	16/04/1997	10479	210.8	30	0
	10510	SAVEA	18/04/1997	16/05/1997	10510	123.79	36	0
	10518	TORTU	25/04/1997	09/05/1997	10518	263.5	15	0
	10540	QUICK	19/05/1997	16/06/1997	10540	263.5	30	0
	10541	HANAR	19/05/1997	16/06/1997	10541	263.5	4	0.100000001490116
	10583	WARTH	30/06/1997	28/07/1997	10583	123.79	10	0
	10616	GREAL	31/07/1997	28/08/1997	10616	263.5	15	0000007450581E-02
	10624	THECR	07/08/1997	04/09/1997	10624	123.79	6	0
	10629	GODOS	12/08/1997	09/09/1997	10629	123.79	20	0
	10666	RICSU	12/09/1997	10/10/1997	10666	123.79	36	0
	10672	BERGS	17/09/1997	01/10/1997	10672	263.5	15	0.100000001490116
	10687	HUNGO	30/09/1997	28/10/1997	10687	123.79	10	0
	10691	QUICK	03/10/1997	14/11/1997	10691	123.79	40	0
	10698	ERNESH	09/10/1997	06/11/1997	10698	123.79	12	0000007450581E-02
	10772	LEHMS	10/12/1997	07/01/1998	10772	123.79	18	0
	10783	HANAR	18/12/1997	15/01/1998	10783	263.5	5	0
	10787	LAMAI	19/12/1997	02/01/1998	10787	123.79	20	0000007450581E-02
	10791	FRANK	23/12/1997	20/01/1998	10791	123.79	14	0000007450581E-02
	10801	BOLID	29/12/1997	26/01/1998	10801	123.79	20	0.25
	10805	THEBI	30/12/1997	27/01/1998	10805	263.5	10	0
	10816	GREAL	06/01/1998	03/02/1998	10816	263.5	30	0000007450581E-02

Emailing results



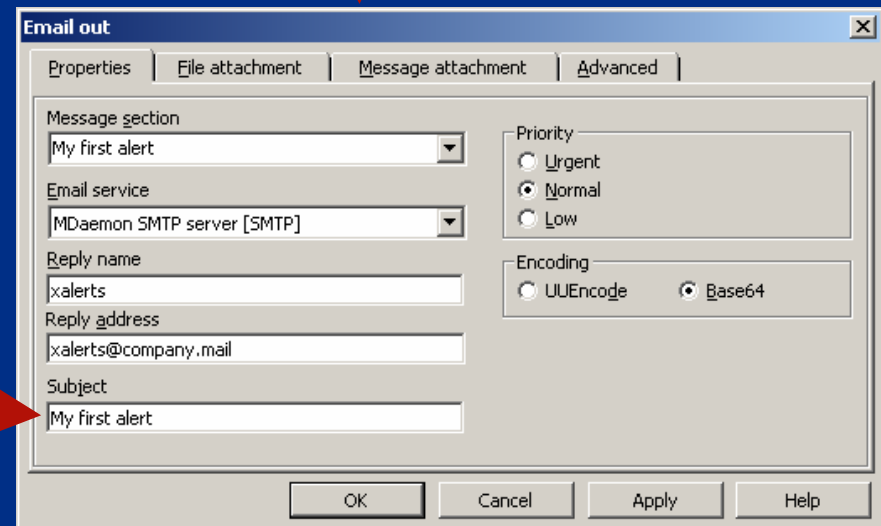
Point & click users to receive results of test – can include audit team and client staff

Personalise email with headings



The **Email** module is the most often used distribution method, but also available are Pager, mobile phone SMS, WAP phone, voice etc

Attach files to emails – eg attach large results tables in a spreadsheet



KOLA Summary – why it works

- Works with any database
- Data need not leave the client site
- Fast set up, minimal client effort
- No software loaded on the client system
- Audit ‘events’ notified by email
- Proactive audit
- Audit of controls, including ‘prevent’ controls
- Monitor remote locations



Continuous audit - Prerequisites

- **Well organised client – systems knowledge**
- **Good control environment – report by exception**
- **Well organised audit team – audit approach planned**
- **Adaptable audit team – change in approach**
- **Detailed understanding of client systems**
- **Identify control owners – to report failures**
- **Senior Management/Internal Audit support**

Practical Lessons Learned

- **Some conventional work is still required**
- **The auditor has not been replaced**
- **Audit planning is also continuous**
- **Audit work is more visible for client**
- **Management like the output – detailed info**
- **Use of KPIs is not widespread**
- **Languages can be an asset**



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