

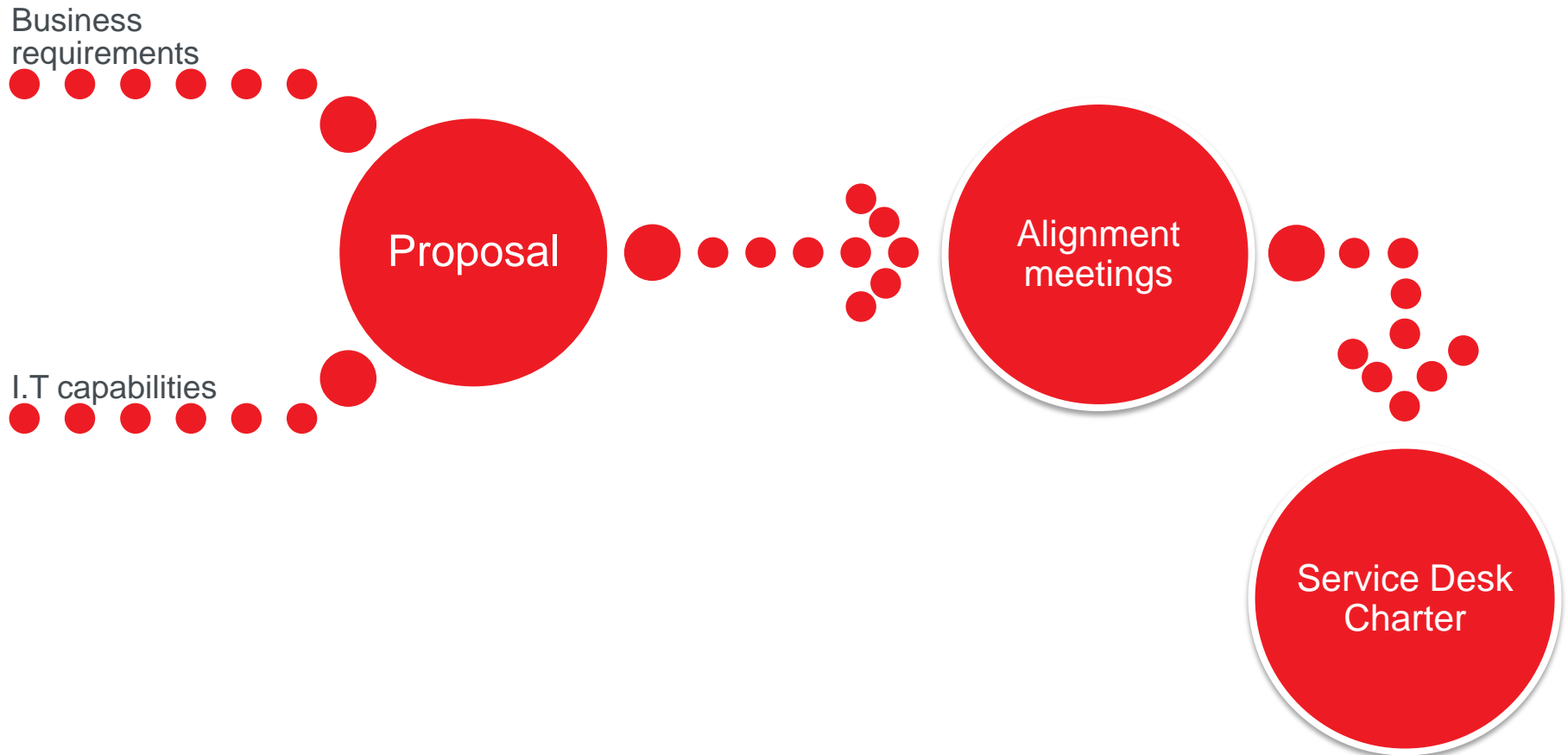
# Novell® Service Desk Design, Deployment, and Best Practices.

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**Novell®**

Best Practice

# Novell Service Desk – Best Practice



# Business requirements

- Key questions to ask during meetings with stakeholders from each area of the business
  - Who are they and what business function do they have?
  - What do they need supporting ? e.g software
  - What types of request will they make ? e.g X is broken, how do I achieve Y, I need Z
  - What response are they expecting ? e.g If X is broken, then it must be fixed within Y hours.
  - How do they intend to make requests?

# Business Requirements

Who are they and what business function

- The service desk must keep its customers happy
- Customers could be internal, external or a mixture of both
- Need to be able to respond to their needs in a timely manner
- This means knowing who they are and what business role they have.

- Needs and response times will vary

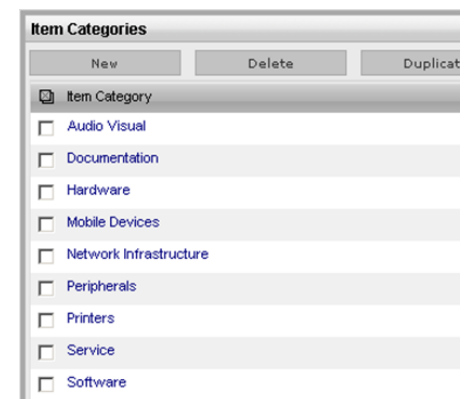
## • Sources

- HR
- Directory Service
- Org charts

# Business Requirements

What will be supported?

- Each department or group that you will be meeting will have items that they want supporting
  - This is stored in NSD CMDB
- CMDB is a list of 'stuff' that will be supported
  - Optionally has relationships between each bit of 'stuff'
- Create a list of items with business owners
  - Group similar items together under a category



# Business Requirements

What will be supported?

Category	Item	Department	Description
Hardware	Lenovo W500	Sales	Standard laptop used by sales teams
Hardware	Dell R710	I.T	ACME Corporate standard server
Printers	HP LaserJet P4015DN	Marketing	Marketing department printer
Software	Salesforce	Sales , Marketing, Corporate	Company wide CRM system
Software	Email	All	Company wide Email system.

# Business Requirements

What type of request will they make?

- As you create the list of 'stuff' you will need to understand what type of request that may be made against each entry
  - This will help determine what the service desk will be expected to deliver
- Don't think that you must service all requests type at once ( that's a bad idea )
  - Encourage staged deployment
  - Balance skills and resources



# Business Requirements

What type of request will they make?

- Common request types and definitions

- Service Request

- A request from a customer for information, advice, standard change or for access to an IT Service.

- Incident

- An unplanned interruption to an IT Service or a reduction in the Quality of an IT Service.

- Change

- The addition, modification or removal of anything that could have an effect on IT Services.

# Business Requirements

What type of request will they make?

Category	Item	Request	Department	Description
Hardware	Lenovo W500	Incident	Sales	Standard laptop used by sales teams
Hardware	Dell R710	Incident, Change	I.T	ACME Corporate standard server. Changes will require approval
Printers	HP LaserJet P4015DN	Incident	Marketing	Marketing department printer
Software	Salesforce	Incident, Change	Sales , Marketing, Corporate	Company wide CRM system. System. Changes would be user addition, changes to rights, and deletion. All require approval
Software	Email	Incident, Change	All	Company wide Email system. Changes would be user addition / deletion, Mailbox size increase, access to other users mailboxes.

# Business Requirements

What type of response do they expect?

- Service Level Agreements ( SLA ) define response times.
- Typically a SLA will vary depending on what the request is for and the type of request.
- A SLA will also define the hours for which support is being provided.
  - A printer running out of toner will have a low priority and will only be supported 8 x 5
  - SAP will have a high priority and be supported 24 x 7.
  - SLA will automatically pause outside of defined hours and, optionally, public holidays.
- Always suggest SLAs for discussion.
  - Turns into a bun fight if you are not careful

# Business Requirements

What type of response do they expect?

- SLA are divided into priorities, each with its own response, restoration and resolution times
- Priorities ( as defined by ITIL and used by NSD )
- Urgent:
  - Prevents the effective use of any major service
  - Example: Email server failure
- High:
  - Prevents the effective use of any service and affects a substantial number of computer users
  - Example: Printer not working that affects many users without alternative printer available

# Business Requirements

What type of response do they expect?

- Medium:

- Prevents the use of any fully supported service by an individual
- Example: A single customer cannot print

- Low:

- Causes inconvenience to an individual
- Example: A user who wants to format a Word document in a particular way, for purely aesthetic reasons

- Times

- Response: Time period from when the request is first created until a technician changes state
- Restoration: Time period until a request is given a workaround
- Resolution: Total time to resolve the request
- $\text{Response} + \text{Restoration} < \text{Resolution}$

# Business Requirements

What type of response do they expect?

- Examples

- Name: 8 x 5

- Description: SLA for normal business activities, active Monday to Friday, 9 to 5

Priority	Response	Restoration	Resolution
Urgent	1 hour	2 hours	5 hours
High	8 hours	N/A	24 hours
Medium	16 hours	N/A	40 hours
Low	40 hours	N/A	160 hours

- Name: 8 x 7

- Description: 'Stuff' that is used during the working week, 9 to 5

Priority	Response	Restoration	Resolution
Urgent	1 hour	2 hours	5 hours
High	8 hours	N/A	24 hours
Medium	16 hours	N/A	40 hours
Low	40 hours	N/A	160 hours

- Name: 24 x 7

- Description: 'Stuff' that is used 24 hours a day, every day

Priority	Response	Restoration	Resolution
Urgent	1 hour	2 hours	4 hours
High	4 hours	N/A	12 hours
Medium	8 hours	N/A	20 hours
Low	20 hours	N/A	80 hours

# Business Requirements

What type of response do they expect?

Category	Item	Request	SLA	Department	Description
Hardware	Lenovo W500	Incident	8 x 7	Sales	Standard laptop used by sales teams
Hardware	Dell R710	Incident Change	24 x7	I.T	ACME corporate standard server. Changes will require approval
Printers	HP LaserJet P4015DN	Incident	8 x 5	Marketing	Marketing department printer
Software	Salesforce	Incident Change	24 x 7	Sales , Marketing, Corporate	Company wide CRM. System. Changes would be user addition, changes to rights, and deletion. All require approval
Software	Email	Incident Change	24 x 7 8 x 5	All	Email is supported 24 x 7. However changes would only be actioned during business hours

# Business Requirements

How do they intend to make requests?

- Traditionally, people would pick up the telephone and call the Service Desk
- Today's expectations are
  - Email
  - Web portal
  - Telephone
- You need to discover what methods the business intends to use.
  - Like Tax and Death, Email is everywhere.
  - Web portal offers a number of advantages including knowledge base to enable users to answer their own queries



# I.T. Capability

- Key questions to ask during meetings with stakeholders from each area of I.T
  - Who are the support staff?
  - What can they support?
  - What types of request can they deal with?
  - What response can they deliver?

# I.T. Capabilities

Who are they?

- Similar to what you did when finding out who the customers are within the business
- List of people who are involved in running the I.T systems that the business relies on
  - They will most likely be involved in support activities
  - If applicable, include existing members of the service desk
- Sources
  - HR
  - Org charts
  - Directory Service

# I.T. Capabilities

What can they support?

- You have a list of 'stuff' that the business is asking to be supported
  - De-duplicate
- Use the rationalised list to discuss with I.T what they can support

Support staff	Category	Item	Request	SLA	Resolution Time	Department	Description	Request method
Keith Richards Richard Jones Ron Hipcock	Hardware	Lenovo W500	Incident	8 x 7	40 hrs	Sales	Standard laptop used by sales teams	Email
Robert Miller Daniel Porter	Hardware	Dell R710	Incident Change	24 x7	8 hrs	I.T	Corporate standard server. Changes will require approval	Email, Webportal
Keith Richards Richard Jones Ron Hipcock	Printers	HP LaserJet P4015DN	Incident	8 x 5	60 hrs	Marketing	Marketing department printer	Webportal
Keith Richards Richard Jones Ron Hipcock	Software	Salesforce	Incident Change	24 x 7	24 hrs	Sales , Marketing, Corporate	Company wide CRM system. Changes would be user addition, changes to rights, and deletion. All require approval	Email, Webportal
Robert Miller Daniel Porter	Software	Email	Incident Change	24 x 7 8 x 5	24 hrs 60 hrs	All	Company wide Email system. Email is supported 24 x 7. However changes would only be actioned during business hours	Email, Webportal

# I.T. Capabilities

What can they support?

- There will be differences between the skills list and the list of 'stuff' from the business
- Investigate how these gaps can be filled and the associated costs
  - Example: Online training for application X
- Put this information onto an exception list for discussion with the business

# I.T. Capabilities

What types of request can be dealt with?

- In the discussions with the business, you covered what type of request that they would make at a high level.
  - Examples: Service Request, Incident and Change
- You now need to find out what requests I.T can deal with
- As this point in time, we are not determining how these requests will be dealt with
  - Just if I.T should be doing them or not
- To help with this process, lets look at some typical activities that happen for each request type

# I.T. Capabilities

What types of request can be dealt with?

- Service Request

- To provide a channel for users to request and receive standard services for which a pre-defined approval and qualification process exists
- To provide information to users and customers about the availability of services and the procedure for obtaining them
- To source and deliver the components of requested standard services (e.g. licences and software media)
- To assist with general information, complaints or comments

# I.T. Capabilities

What types of request can be dealt with?

- Incident:

- Incident detection and recording
- Initial user support by the single point of contact (service desk)
- Investigation and diagnosis
- Resolution and recovery of service
- Incident closure
- Incident ownership, monitoring, and communication

# I.T. Capabilities

What types of request can be dealt with?

- Change:

- Record requests for change
- Change logging
- Review the request for change
- Assess and evaluate the change
- Evaluation of change
- Allocation of priorities
- Change planning and scheduling
- Authorising the change
- Coordinating change implementation
- Review and close change record



# I.T. Capabilities

What response can they provide?

- Traditionally managers determine SLAs in terms of time.
- That is, managers estimate how long they anticipate certain tasks will take in order to deal with a request.
- This is problematic as it's not the manager performing the tasks and they always tend to be optimistic at best
- First of all, a request may require work from an entire team not just an individual.
  - Philosophically, this places an emphasis on collective effort.
- Second, we need to acknowledge that each request will have a certain degree of difficulty and effort to resolve.
- The team should create SLA response times with guidance from the manager for each type of request
- Record variance from requested SLAs with explanatory notes

# I.T. Capabilities

What response can they provide?

- Meeting outputs
  - Achievable SLA response times
  - Exception report for when achievable != desired
  - New SLAs for certain items
    - Example: Printers are listed against the following SLA with high priority

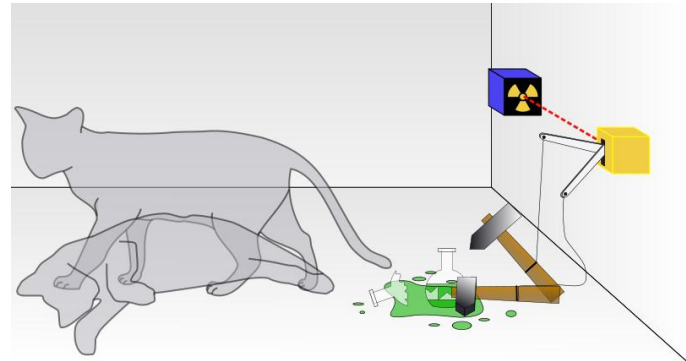
Priority	Response	Restoration	Resolution
Urgent	1 hour	2 hours	4 hours
High	4 hours	N/A	12 hours
Medium	8 hours	N/A	20 hours
Low	20 hours	N/A	80 hours

- The response estimation meeting determines that printer incidents could require spare parts to resolve. There is a contract with a 3rd party maintenance company which is for next business day. Either the priority has to be changed or a new SLA created in which high priority reflects the additional time period

# I.T. Capabilities

What metrics will be used?

- Only if you look can you determine if the cat is alive or dead
  - Schrödinger's cat
- Metrics determine if I.T is alive or dead.
  - “To enable stakeholders involved in IT service management to make informed, rational decisions about the IT services and support offered to customers”
- Starting from this premise, it’s clear that looking at all the data we have available, some of this data is going to be more important to us than the rest. We will refer to the data which is important to us as Key Performance Data.
- But what data?



# I.T. Capabilities

What metrics will be used?

- Your own choice of what is Key Performance Data should be influenced by
  - The challenges you face in delivering IT services to customers
  - The demands made of the IT Service Management function by stakeholders
  - The intended use of the reports
  - Audience of the reports
- For instance,
  - You provide an Email system and your organisation requires the SLA to be met 90% of the time.
  - It would make sense to include SLA target achievement data as part of the Key Performance Data.

# I.T. Capabilities

What metrics will be used?

- Service Request

- The total number of service requests (for trend analysis)
- The size of the current backlog of outstanding service requests
- The mean elapsed time for handling each type of service request
- The number and percentage of service requests completed within agreed target times

# I.T. Capabilities

What metrics will be used?

- Incident

- In addition to recording the number of incidents logged each week, compare the numbers to incidents logged prior to implementing incident management
- Show the types of incident reported
- Show the percentage of incidents handled within the agreed response time
- Show the number and percentage of incidents resolved remotely, without the need for a visit

# I.T. Capabilities

What metrics will be used?

- Change

- Reduction in the number of disruptions to services, defects and rework caused by inaccurate specification, poor or incomplete impact assessment of changes
- Reduction in the number of unauthorised changes
- Reduction in the number and percentage of unplanned changes and emergency fixes
- Change success rate (percentage of changes deemed successful at review/number of RFCs approved)

# I.T. Capabilities

What metrics will be used?

- You should also consider measuring the satisfaction of your customers that interact with the service desk. This is an area this is frequently overlooked but carries substantial value
- A good approach to measure customer satisfaction is case-by-case surveying. Each time a case is closed, which means the request has been resolved and the resolution has already been communicated to the applicant, a short survey on the case is sent to the customer.
  - Speed of response
  - Was your question answered in full?
  - Knowledge of staff
  - Ability for help desk to diagnose the problem quickly
  - Ability to get through to a staff member promptly
  - Time to solve problem
  - Kept informed of the progress of your ticket



# Service Desk Proposal

- The proposal should cover
  - Who will be supported within the business
    - Departmental level, don't go down the level of individuals
  - What will be supported
    - Categories and types of item e.g. Laptops, Desktops, MS Office etc..
    - Break out by department if needed
  - What requests will be covered
    - Service Requests, Incidents , Changes
    - Illustrate with examples for each type of request
  - What response will be given
    - Baseline is SLA by categories and types
    - Exceptions for certain departments and individuals
  - What metrics will be used
    - The list of metrics that will indicate success

# Alignment Meetings

- The proposal will be discussed with key stakeholders from the business and I.T.
- Adjustments may need to be made to the proposal before alignment will be obtained. It is vital that any changes and the reason for them is recorded.
- More than one meeting may be necessary.

# Service Desk Charter

- Now that the proposal has been accepted you should create a Service Desk Charter.
- Obtain signatures from senior IT and business management to help give it authority
- It serves two main purposes
  - Let's your customers know what to expect
  - Let's you know what your goals are
- This should not be seen as something that is fixed in stone. You will need to revisit on a regular basis with your organization to make sure that they these are what they require.

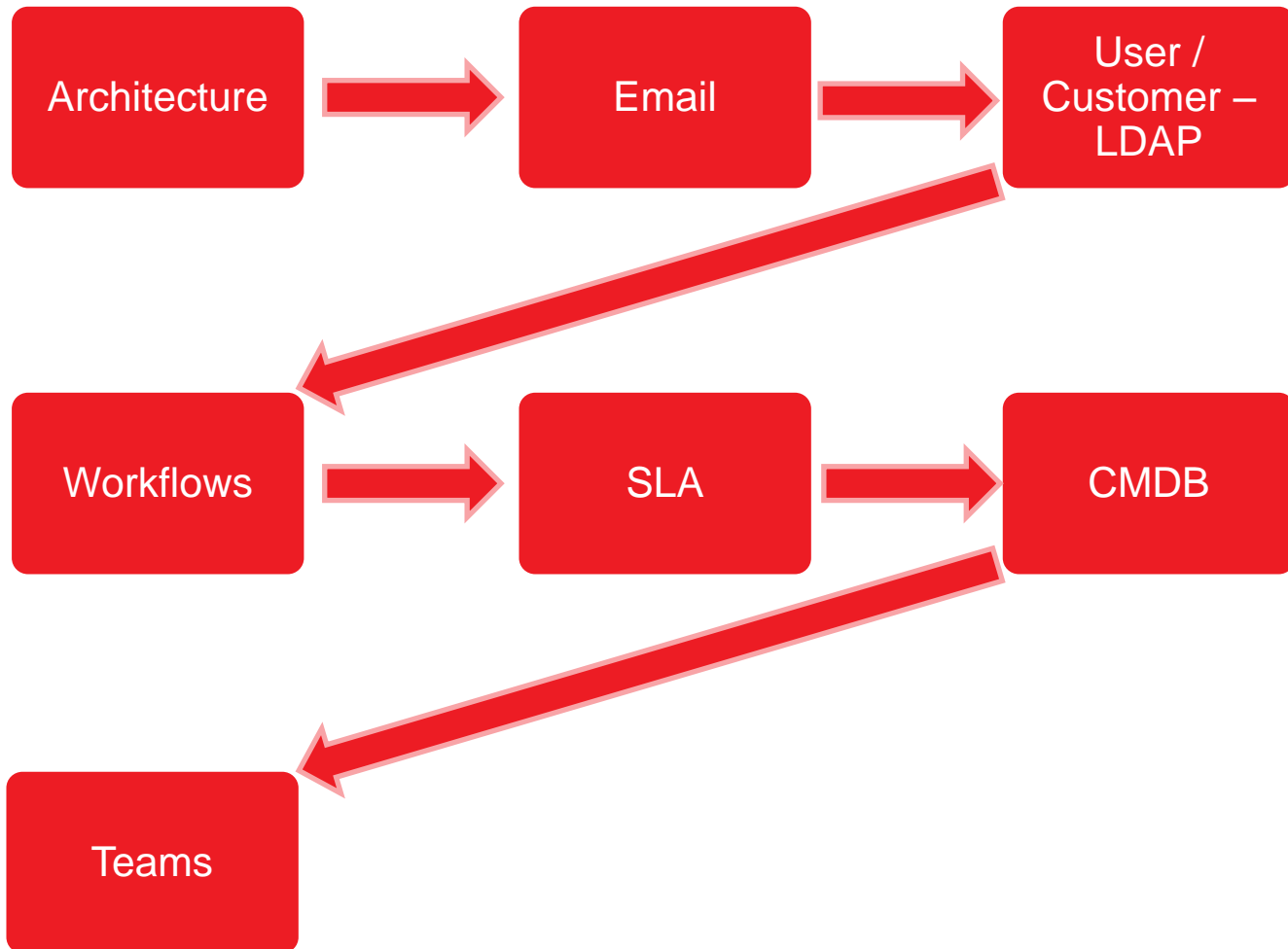
# Service Desk Charter

- Here's an example

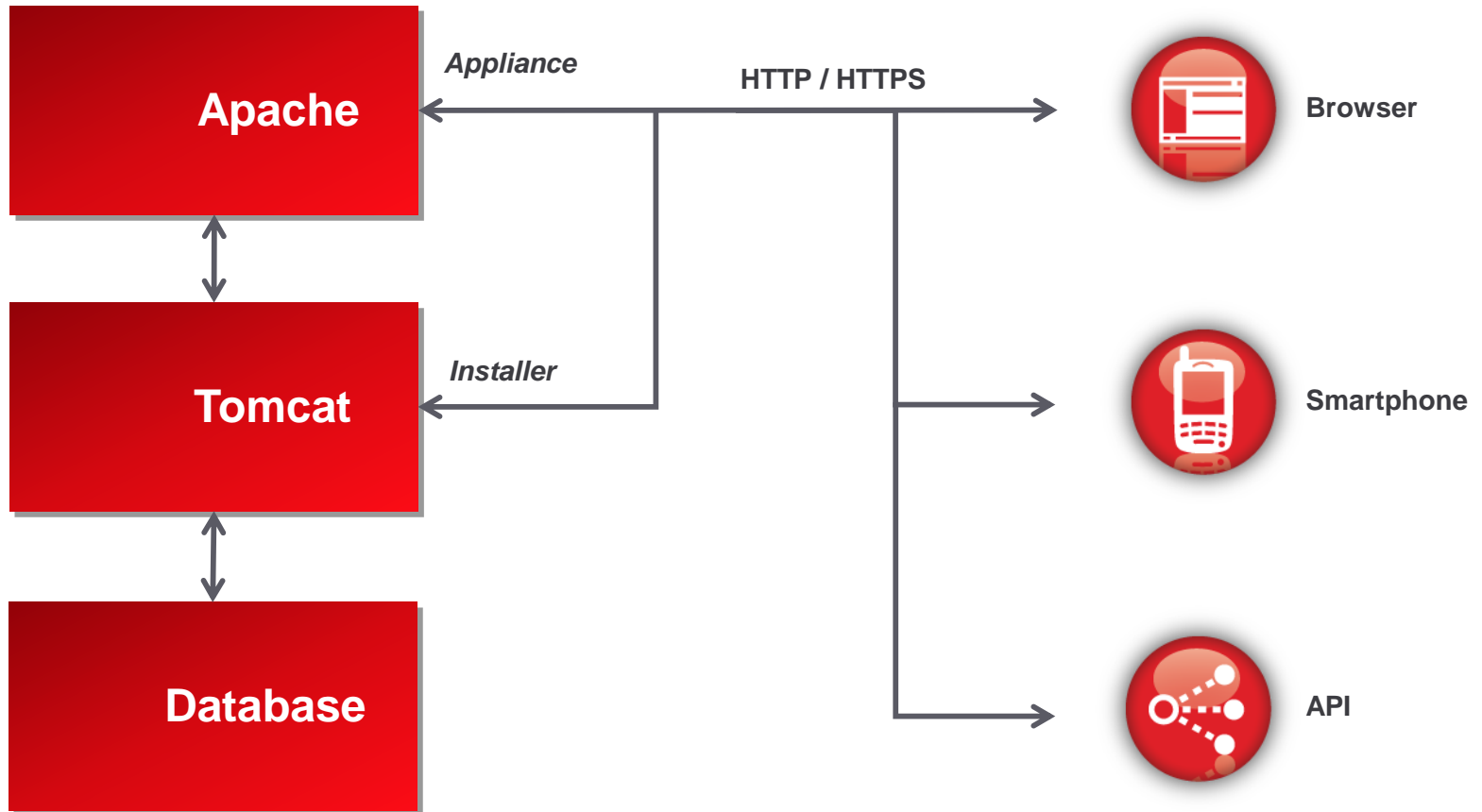
- To enable incidents and requests to be dealt with quickly and effectively.
- To ensure that an incident only requires reporting once.
- To ensure that those providing technical support understand the details to enable them to resolve incidents as quickly as possible.
- To provide a system that is up and running, even if only a temporary repair, but to ensure it is fixed completely within a specified time.
- To get best value for money from those providing technical support by providing good quality information about incidents and requests.
- To report on trends, common incidents and their resolution to business area leaders

# Implementation Guidance

# Now what?



# Architecture



# Architecture

- Single server with db on another server works for vast majority of installations
  - Load balancing / High Availability has never been implemented.
- 2-4 Processors and 4GB of ram is the bare minimum.
  - The database connection will eat up a vCPU by itself.
  - Use 2 vCPUs for small implementations( < 15 tecs) and 4 vCPUs for everyone else.
  - 4GB RAM is also a min. 8GB would be ideal.
- Disk space sizing
  - If attachments are expected to be a regular occurrence, consider 100GB of disk space per year for planning purposes.



# Architecture

## • Attachments / indexes

- Move /LiveTime folder onto a partition other than root.
- Requires changing the system.properties config file
- Modifying the /etc/fstab file to automount partition

## • Database

- MS SQL using dynamic ports is a big no
- Once the database is created, have the DB admin get the actual port and not rely on dynamic discovery.

## • Customised logos

- For a better appearance, use transparency

# Email

Email

- Use a new inbox

- Never use existing one
- NSD deletes emails from inbox after processing them

- Create alias to inbox

- This allows multiple email addresses to be used, each reflecting a different purpose
- Each alias is sent to the team that uses it
- Example:-
  - Inbox: [nsd@acme.com](mailto:nsd@acme.com)
  - Alias1: [support@acme.com](mailto:support@acme.com)
  - Alias 2 [Changes@acme.com](mailto:Changes@acme.com)

- Etc..

- Polling interval of 3 minutes is fine for testing. Use 15 minutes for production

# User / Customer

- Directory service is recommended
- V7 supports multiple LDAP sources
- Be sure to use an LDAP user/proxy account that has rights to search in the tree where the users are.
- Import is from group membership
  - All groups have to be in the same OU
- For Active Directory these must be security groups and sAMAccount name attribute set correctly
- A required number of attributes must exist
  - First name, Last Name , Login name and email address
  - If using temps on the Service Desk, make sure they have email addresses
- Multiple telephone numbers in a user object are not welcome
  - Import barfs

# User / Customer

- Always have at least one person in Administrators / Supervisor groups
- A Supervisor is also a technician
  - If they are in both you will see an error message. This can be ignored as it does not impact anything
- Common reasons why import fails for one or more users
  - Missing one or more required attributes
  - Distribution group used with A/D
  - sAMAccount name does not match group name
  - Groups are not in the same OU

# Workflows

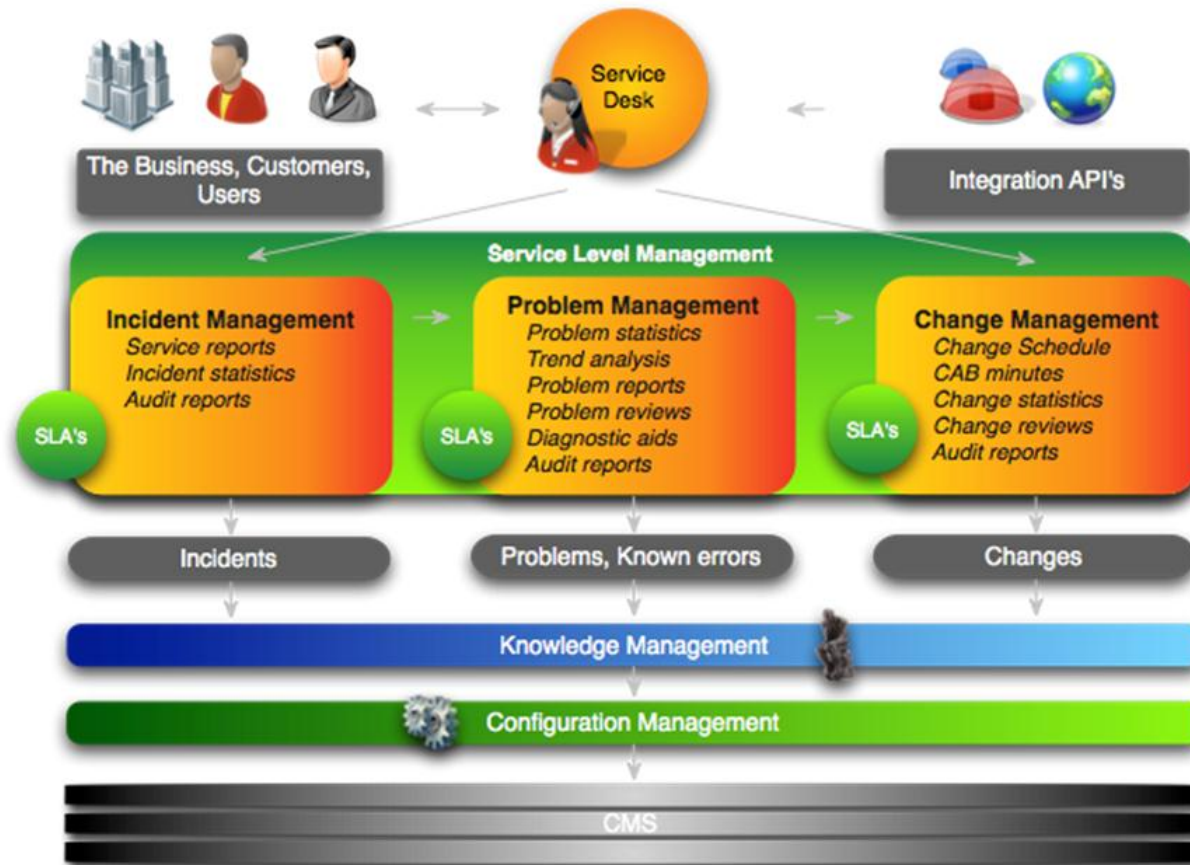
- There are standard workflows supplied with NSD
- Never edit these, always duplicate
- Look before you leap
  - Use pencil / paper to design
- Workflows are used to reflect the steps required to resolve a request
  - It's not business process automation
  - Yet....
- KISS applies

# SLA

- Workflows are where SLA timers stop / start
- With default SLAs, only resolution timer is active
- Response + Restoration < Resolution
- If you are not sure, keep to Resolution
- Assign SLAs to CMDB entries
  - User / departmental / Org level SLA can also be used and will override a SLA at the CMDB level
  - Use these as exceptions
- KISS applies
  - Too many SLAs applied all over the place makes it difficult to troubleshoot

# CMDB

- Important to get this correct



# CMDB

## • Category

- High level description of similar items
- Just because a CI can hold 20 custom fields does not mean that you should
- Request classifications
- Lifecycle workflow. Watch for when an item is visible to customers
- E.g. server, router, printer, laptop



# CMDB

## • Type

- Definition for an item.
- Inherits characteristics from it's Category
- Add specific classifications at this level
- If you don't want to use the system default SLA, choose one here
- Choose identifier which will be shown next to the item number. Asset tags / hostnames common choices
- E.g Lenovo W500

## • Item

- The actual 'stuff'
- E.g 100040 : LT0001

# CMDB

## • Service catalogue [ ITIL edition ]

- Service catalogue is a simple representation of 'stuff'
- E.g Email rather than Groupwise / Outlook / blah
- You can link the service catalogue to the 'stuff' that provides the service in question



- Makes it very easy for customers to use the web portal as they do not require any knowledge of the underlying technology
  - May need technician to alter request to the actual item in question
- It is recommended to log everything against a service catalogue entry

# CMDB

## • Making links between items

- KISS rule applies
- Only create relationships that make sense
- Enough to show dependencies involved
- E.g Email -> Application -> OS -> Server
- Do not have relationships between each and every item

## • Request routing

- A request for a CI will always go to the associated team when first created
  - It can be moved afterwards

# CMDB

## • Importing from ZCM

- Never ever import devices and software for each of them
- 1 device can have hundreds of inventoried software items
- Quickly expands CMDB to 100ks

## • Two rules of automatic ownership assignment

- ZCM must collect the inventory login name
- A matching login name as part of the user / customer record must already exist in Service Desk
- If no match found, device is deemed to be owned by everyone

# Teams

- If you want to use email for creating requests, assign an email address to a team
  - Use alias as mentioned previously
- Team can consist of several layers. Each layer will usual represent increase skill / power to resolve the request within that teams scope
- Use multiple Teams to reflect skills / org structure
  - E.g Firstline, Server, Business Apps
- Requests can be passed between teams
  - If not using OLAs, make sure that you enable the privilege to allow this

# Teams

Teams

- For a technician to be able to edit a request they must
  - Be in the team that the request is allocated to
  - Be in the same layer as the request current exists in

Best practice will be on  
documentation site

[http://www.novell.com/documentation/service\\_desk7/](http://www.novell.com/documentation/service_desk7/)

Please give feedback

Thank you.

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