

# Architecting your SUSE Manager deployment

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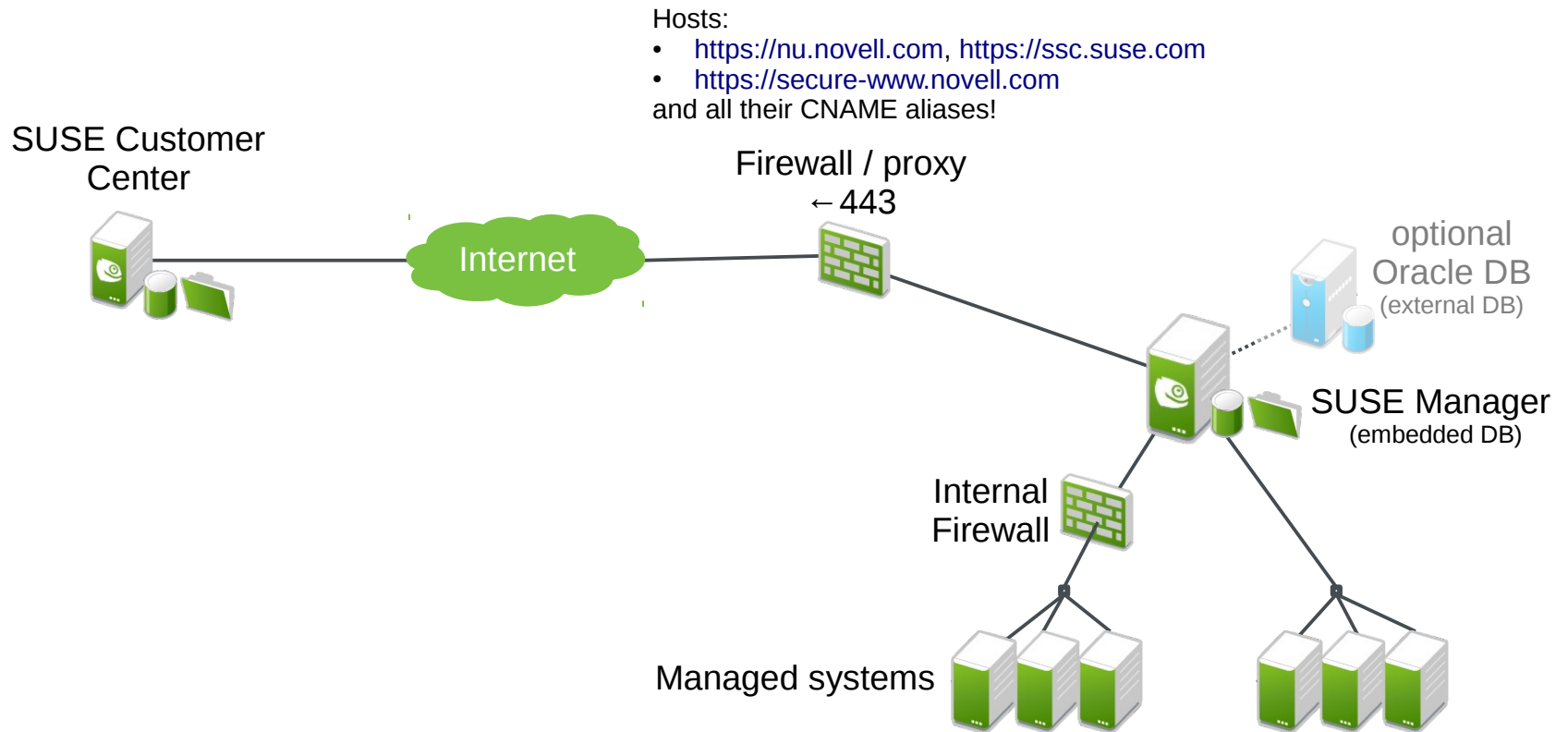
# Architecting the SUSE Manager deployment

# Agenda

- Deployment scenario's
- Client connection methods
- Network connectivity requirements
- System Requirements
- Database considerations
- Checklist for deployment

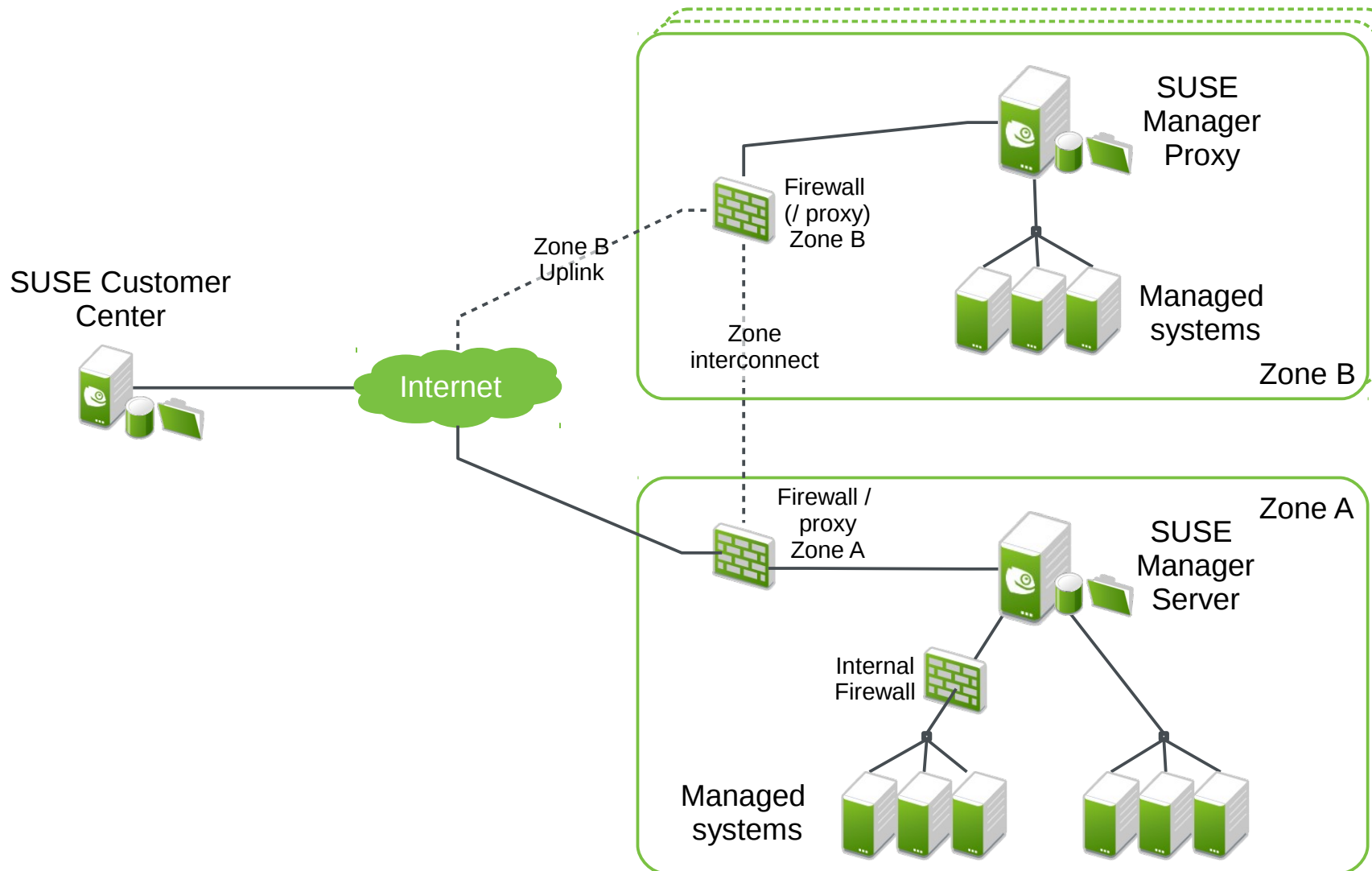
# Deployment scenario's

## Typical deployment scenario



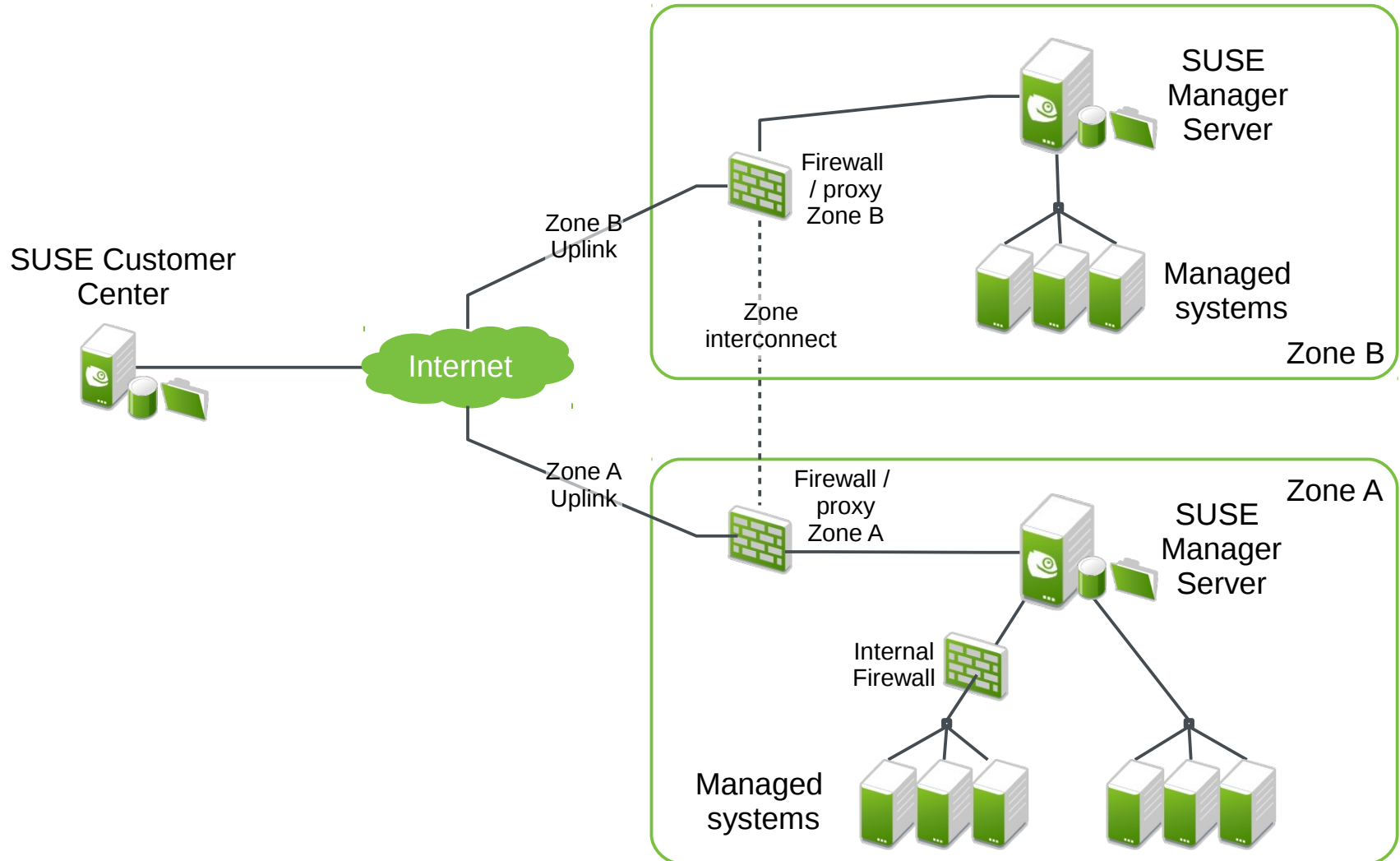
# Deployment scenario's

## Multi-zone scenario with Proxy



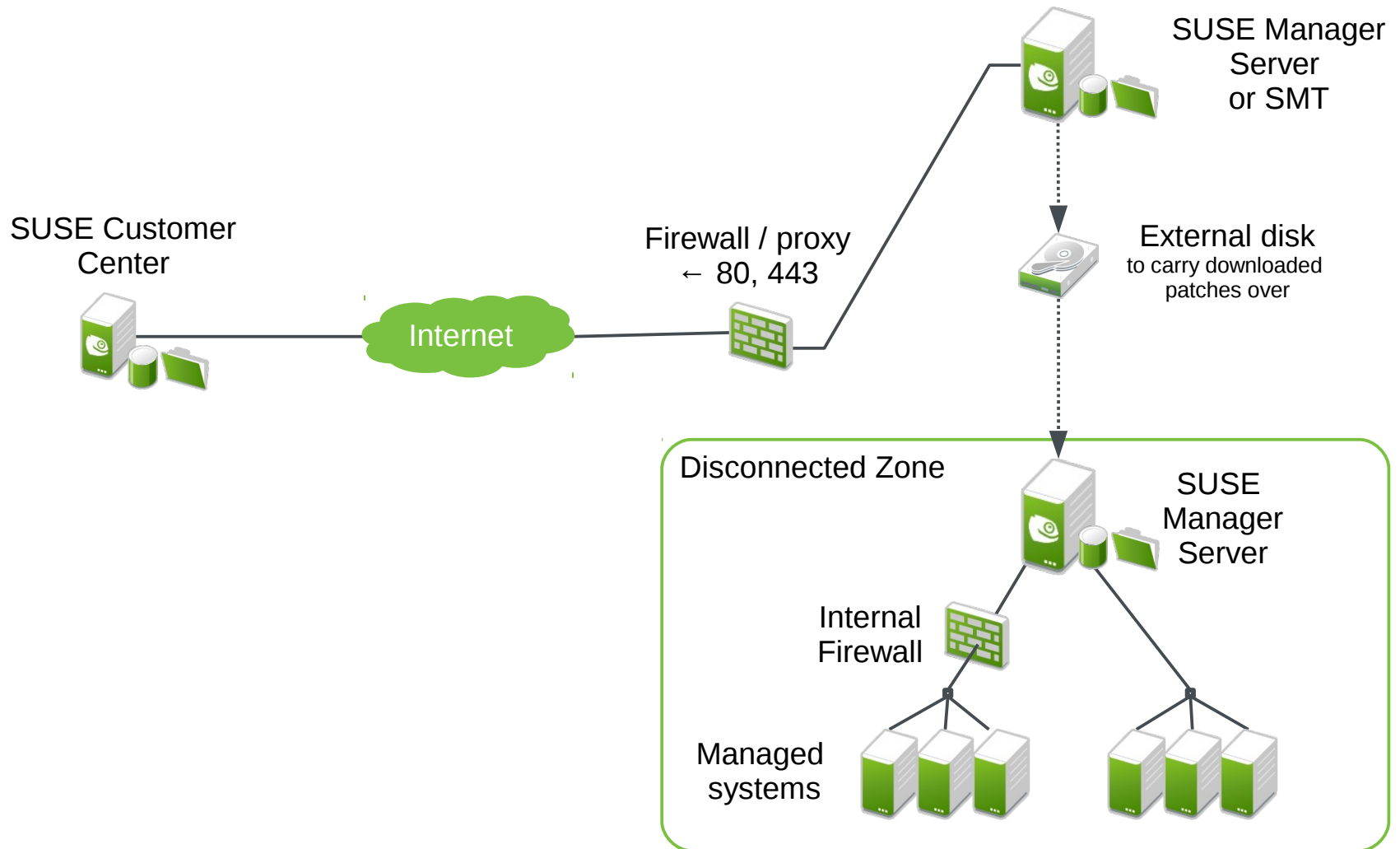
# Deployment scenario's

## Multi-zone, multi-Manager scenario



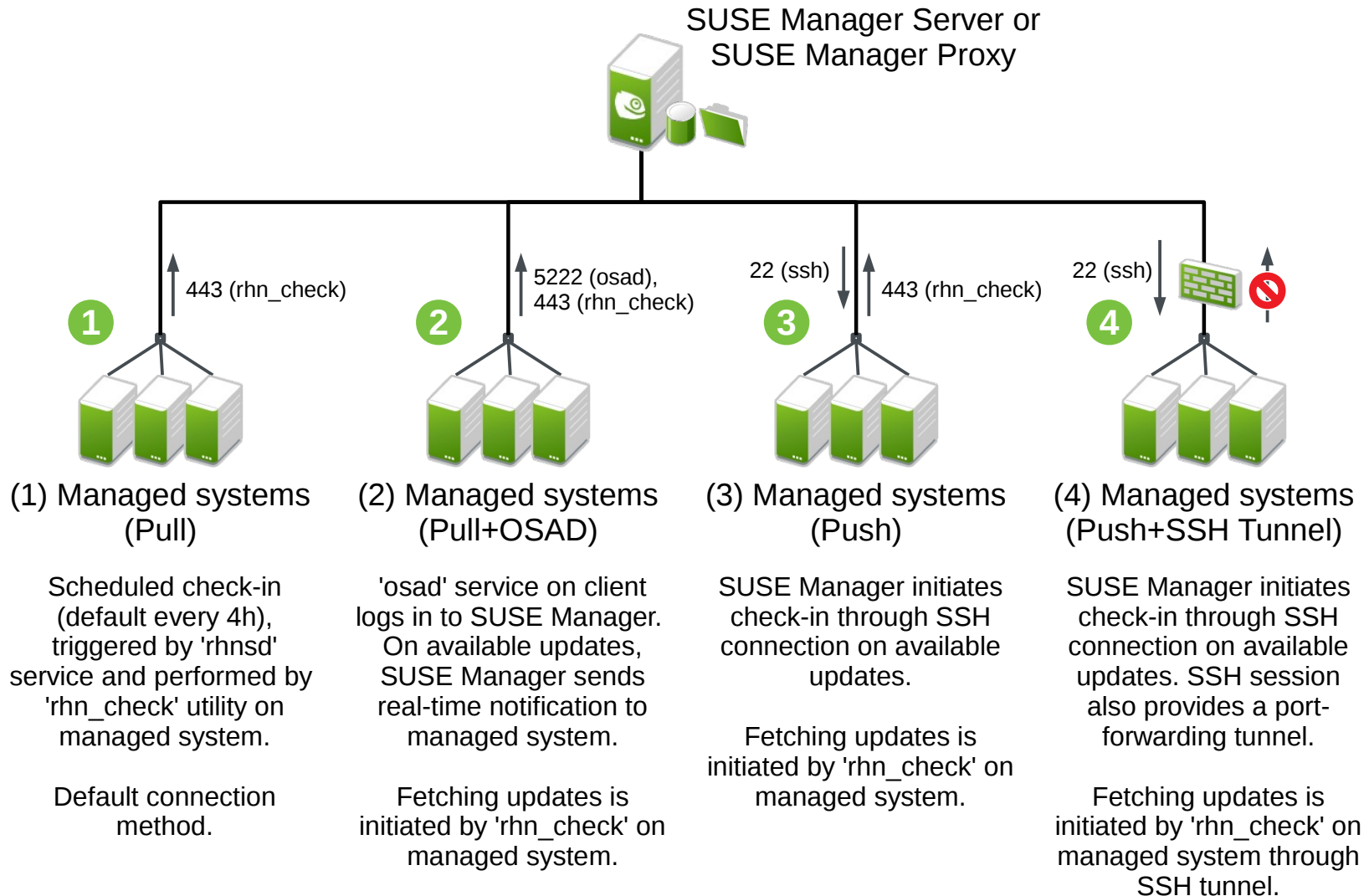
# Deployment scenario's

## Disconnected Zone scenario



# Client connection methods

## Overview Client Connection Methods





## Client connection methods

# Choosing Client Connection Method 1/3

### Basic considerations:

- Clients may connect to both SM Server and Proxy with any one of the connection methods.
- Clients may change connection methods at any time, without disruption to client, server or proxy.
- Default client connection method is (1).
- More than one connection method may be used within a deployment, zone or segment.
- Connection methods have different resource requirements: (1) < (2) < (3),(4)
- Max nr. of managed systems per SM Server: ~1000, when using (1)

## Client connection methods

# Choosing Client Connection Method 2/3

### Basic considerations (cont.):

- By replacing the “rhnsd” package with the “osad” package on a managed system, connection method (2) is used.
- Connection methods (3) and (4) require neither “rhnsd” nor “osad” packages.
- Retrieval of updates will always be initiated by the “rhn\_check” utility on the managed system.
  - On systems with method (3) and (4) “rhn\_check” will always be executed by SUSE Manager remotely through an SSH Tunnel.
- “rhn\_check” may be executed manually.
  - On systems with method (3) and (4) from SUSE Manager.
- Evenly distributed check-ins in time will allow SUSE Manager to serve more managed systems.

## Client connection methods

# Choosing Client Connection Method 3/3

### A few qualifying questions to choose the connection method:

- Are there managed systems, that can not initiate TCP connections to SUSE Manager?
  - Yes: type (4) is required for these systems
  - No: no restrictions on connection types from this point of view
- Nr. of clients > 500 for SUSE Manager Server(\*)?
  - Yes: (1) is preferred; (3) and (4) may require additional Proxy
- Delay allowed between availability of an update on SUSE Manager and check-in of the managed system?
  - Yes: (1) preferred
  - No: (2), (3) or (4) may be required

(\*) excluding all other managed systems connecting through a SUSE Manager Proxy

## Network connectivity

# Firewall rules: SUSE Manager Server

- Inbound connections

- 67: if SM is a DHCP server for systems requesting IP addresses.
- 69: if SM is a PXE server
- 80: to access SM WebUI
- 443: to access SM WebUI through SSL
- 5222: incoming OSAD connections (connection type (2)) from clients
- 5269: push actions to Proxy

- Outbound connections

- 80: to \*.novell.com, \*.suse.com in order for SM to access Customer Center
- 443: to \*.novell.com, \*.suse.com in order to mirror patches/upgrades
- 4545: in order for SM to access Monitoring daemon on clients
- 5269: push actions to Proxy

## Network connectivity

# Firewall rules: SUSE Manager Clients

- Inbound connections

- 4545: in order for the SUSE Manager Server to access Monitoring daemon on clients
- 22: in case of “Push via SSH Tunnel” contact method

- Outbound connections

- 80(plain) and/or 443(SSL): in order for client to access SM
- 5222: initiate OSAD connections (connection type (2)) to SM/SMProxy

## Network connectivity

# Firewall rules: SUSE Manager Proxy

- Inbound connections

- 5222: for incoming OSAD connections (connection type (2)) from clients
- 5269: for push actions to SM
- 22: in case the Proxy is used to access clients with the “Push via SSH Tunnel” contact method

- Outbound connections

- 80(plain) and/or 443(SSL): in order for SMPProxy to access SM
- 4545: in order for SMPProxy to access Monitoring daemon on clients
- 5269: for push actions with SM

## Network infrastructure services

# SUSE Manager as deployment server 1/2

### Two necessary roles for deployment:

- DHCP server
  - Serving basic network configuration
  - Serving “next-server” parameter
- Deployment server
  - Serving bootloader and bootloader configuration
  - Serving unattended installation answer files (AutoYaST, Kickstart)
  - Serving installation images and packages

## Network infrastructure services

# SUSE Manager as deployment server 2/2

### Basic Considerations:

- SUSE Manager can perform both aforementioned roles.
- Existing DHCP servers may be used, however the served “next-server” parameter must point to SUSE Manager.
- To be deployed managed systems don't necessarily have to be on the same L2 LAN as SUSE Manager.
- DHCP Relays may be used when deploying managed systems



# System requirements

## SUSE Manager

- Physical / Virtual machine
- 64bits Intel/AMD
- RAM:
  - 4GB (minimal)
  - 8GB (recommended)
- Disk:
  - 30GB for installation,
  - 100 GB for repository mirrors

## SUSE Manager clients

- SLES 10:
  - SP3 LTSS, SP4 LTSS
  - x86, x86\_64, Power, System z, Itanium
- SLES 11:
  - SP3 or SP2 LTSS, SP1 LTSS
  - x86, x86\_64, Power, System z, Itanium
- SLES 12:
  - GA
  - x86\_64, Power, System z, Itanium
- RHEL 5,6,7:
  - x86, x86\_64

## PoC Test clients

- At least 4 VMs

## Database Considerations

# Considerations for Choosing a DB

	External Oracle DB	Embedded Postgres DB
Additional costs	yes	no
3rd party DB access (eg. reporting)	yes	yes
SUSE Manager deployment supported by SUSE	yes	yes

See also:

- [SUSE Manager Documentation: Database Requirements](#)
- [Database HOWTO](#) on SUSE Manager Wiki

## Database Considerations

# Database preparation for Oracle

If deploying SUSE Manager with an external Oracle DB, you'll need to prep your DB.

Please make sure that an Oracle DBA performs these [instructions\(\\*\)](#) !

(\*) [http://wiki.novell.com/index.php/SUSE\\_Manager/RDBMS#Additional\\_Setup](http://wiki.novell.com/index.php/SUSE_Manager/RDBMS#Additional_Setup)

# Checklist / BOM

## in preparation for deployment

- Choose deployment scenario
- SUSE Manager Server
  - Prepare physical or virtual system
  - Network resources: reserve Hostname, IP address
  - Database (Postgres/Oracle)
  - Customer Center
    - Entitlement for SUSE Manager
    - Customer Center: credentials corporate account(s) containing product entitlements
- Database (only in case of Oracle)
  - Provision DB
  - DB credentials
  - Apply DB requirements
- Network
  - Firewall rules (if applicable)
    - to Internet
    - to the managed clients
  - Proxy settings/credentials
  - DNS: Add record(s) for SUSE Manager Server
  - Configure DHCP “next-server” parameter for deployments (if applicable)

# Questions

If you prefer email, please direct your questions to [gnyers@trebut.com](mailto:gnyers@trebut.com), [srickerd@suse.com](mailto:srickerd@suse.com) or [atortola@suse.com](mailto:atortola@suse.com).

(click on above link to open your email client)

The slides are available via the [SUSECon](#) website and via [Slideshare](#).



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Thank you.





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